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ADDRESSES.

HOMŒOPATHY AND MEDICAL PROGRESS DURING THE PRESENT CENTURY.

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I purpose, this evening, directing your attention to homœopathy, and particularly to its principles as enunciated by Hahnemann and the manner in which they have been influenced by medical progress, and briefly to compare its achievements with those of scientific medicine during the present century. To appreciate fully the condition that made homœopathy a possibility, it is necessary that we consider the tenor of medical thought and teaching during the eighteenth century.

The eighteenth century was the age of systems and theories. There existed an abundance of material obtained from observation and the natural sciences, but it remained undigested. One hundred years before, Sydenham had written: "The improvement of physic, in my opinion, depends first upon collecting as genuine and natural a description and history of disease as can be procured; second, upon laying down a fixed and complete method of cure." But the profession failed to pursue the paths of careful observation, and had been led to believe that some fixed law controlled the development of all forms of disease, and innumerable theories were propounded to explain the occurrence of all diseased manifestations. A few will illustrate the tendency of the age.

Stahl created the dynamico-organic system. The soul was made the supreme principle of disease which alike causes and cures. Stahl scorned anatomy and physiology, and was an enemy of erudition and authorities.

Hoffmann introduced the mechanico-dynamic system. In the body, he taught, life expressed itself in motion. Death was the cessation of all movement. But these mechanical phenomena, in their normal and abnormal manifestations, were controlled by a nervous spirit, which he saw fit to define as "the æther."

Then there was the school of Montpelier, which taught that the various organs possessed an individual life—that the stomach, heart and brain formed the "tripod of life." As the vital principle was the cause of all phenomena of life in the human body, all disease was the result of an affection of the "vital force." In Germany a more energetic school endorsed the doctrine of vital force, believing that an inseparable union of force and matter existed in the various organs of the body.

Darwin also had a system uniting, in some ethereal way, spirit and matter, as a result of which there occurred in the human body vital, periodic and chemical movements.

Mesmer, too, that prince of imposters, posed as the apostle of a new doctrine, claiming that everywhere throughout nature the magnetic fluid flowed from the hand, pouring out its healing influences upon all susceptible to it.

The Brunonian system received many supporters. It was unnecessary to make any special diagnosis; it required no fixed symptomatology; it made no distinction between local and general diseases. All that was required was to determine the grade of disease in accordance with the strength or weakness of the active irritation. The art of the physician was simply to adjust the right proportion of strengthening or weakening medicines to the case; to determine whether the condition was sthenic or asthenic, and act accordingly.

It is unnecessary to refer to the phlogistic and antiphlogistic theories; to the doctrine of infarction, or, in reality, fæcal impaction, as a universal cause of disease; to Cullen's theory of nervous force, or the efforts made by the old Vienna school to create a place for clinical instruction. It is but necessary to remind you further that chemistry was merely a suggestion of its present self, oxygen having been but discovered; that physiology, pathology and histology existed but in their merest infancy; that, more than all, the bitterest opposition of the different theories existed toward each other. In this chaotic age, when real investigation had been neglected and speculative philosophy seemed to take possession of even the best minds, another theorist announced another universal hypothesis for the development and cure of disease.

Samuel Hahnemann was born in 1755 in Meissen, Germany, pursued his studies at Leipsic and Vienna, and graduated in 1779 at Erlangen. It is said that, being dissatisfied with the discordant theories and methods of treatment of his time, he abandoned practice and sought seclusion for reflection and study. In 1790, just 100 years ago, he promulgated his first writings. It was then that Cullen's Materia Medica had been translated into German, and in it, for the first time, occurred the recommendation of Peruvian bark for malarial difficulties. This awakened in Hahnemann's mind the idea that the virtue of the drug depended upon its ability to excite malarial symptoms in a healthy man, the proof of which he claimed to have established in his own case. With this, then, fixed in his mind as the fundamental hypothesis of drug administration, he resumed his practice in 1796.

He began at once to write largely, addressing himself alike to the laity and the profession, and received as students, to whom he delivered lectures, all applicants, irrespective of any or no previous medical education. In 1805 he first used the term "homœopath," and referred to those pursuing any of the many other systems in vogue as "allopathists."

His main work, the "Organon der Rationellen Heilkunde," appeared in 1810. Besides being a polemic against medical practice of his day, it contained a full statement of his own theories. His other works were "Reine Arzeneimittellehre," published from 1811–1821, and his last large work on "chronic diseases," which appeared in 1828.

As it has been possible for me to obtain of his works only the Organon, to thoroughly elucidate his doctrines I shall have to refer additionally to reviews of his other literary productions written by Jürgensen, entitled "Wissenschaftliche Heilkunde und ihre Widersacher," 1872, which was published in Volkmann's Sammlung, and "Die Homœopathie Hahnemanns und die der Neuzeit," by Carl Kœppe, 1881. The edition of the Organon to which I shall have occasion to refer is the fifth American, translated from the fifth German by C. Wesselhœft, M.D., in 1875, and published by F. E. Boericke in 1887. We are assured at the outset by the translator, in his preface, that "Hahnemann's Organon of the art of healing still continues to be the foundation which bears the new and growing school of medicine known as that of homœopathy."

The Organon is composed of an introduction, the work proper, which consists of 292 paragraphs, 151 explanatory notes and an appendix, endorsing mesmerism and teaching its proper application.

I shall attempt, as briefly as possible, to present to you the principles of homœopathy, and this I believe can best be done by answering two questions from the standpoint of Hahnemann: (1) What is the nature of disease, and (2) upon what theory must its cure be attempted?

What is the nature of disease? There is no difficulty in reaching Hahnemann's conception of the essential nature of disease. In his introduction we find stated in italics, "Diseases will not cease to be (spiritual) dynamic aberrations of our spirit-like life, manifested by sensations and actions." He is quite wrought up at the claims made by the pathologists of his day, who were asserting that material changes occurred in the body when affected by disease, for he completes the sentence quoted by saying, "That is, they will not cease, for the sake of those foolish and groundless hypotheses, to be immaterial modifications of our sensorial condition." In answer to those who claimed to cure diseases of the skin by local applications, to remove tumors, glandular swellings, fistulæ, necrosis and a host of other surgical affections by operative measures, he says: "But mark the result! Metastases is sure to appear sooner or later (but which are then pronounced as new diseases), and invariably more serious than the primary disorder, refute their assertions sufficiently, and could or should undeceive them by disclosing the deeper immaterial nature of the evil, as well as its dynamic (spirit-like) origin, to be combated only by dynamic processes."

In section 9 of the Organon we find this statement: "During the healthy condition of man this spirit-like force (autocracy) animating the material body rules supreme as dynamis," while section 11 reads: "In sickness this spirit-like, self-acting (automatic) vital force omnipresent in the organism is alone primarily deranged by the dynamic influence of some morbid agency inimical to life. Only this abnormally modified vital force can excite morbid sensations in the organism and determine the abnormal functional activity which we call disease. This force, itself invisible, becomes perceptible only through its effects upon the organism, makes known and has no other way of making known its morbid disturbance to the observer and physician than by the manifestation of morbid feelings and functions; that is, by symptoms of disease in the visible material organism."

Disease, then, from the Hahnemannian standpoint, is a spiritual manifestation, a disturbance of the spirit force which animates our body, and which is called dynamis. As this term permeates all homœopathic literature and is used in defining not only the nature of disease, but the character of the power exerted by drugs, its real definition is not to be misunderstood.

Hahnemann recognized no physical signs; he discountenanced physical examination. True, when he first wrote, at the close of the last century, Auenbrugger, Corvisart and Lænnec had

not revealed to the medical world the wealth of learning this branch of our art was to unfold; yet when he issued his fifth edition, in 1833, physical science had become the common property of the profession. Subjective symptoms were to Hahnemann the guiding stars of treatment. Hahnemann simply followed the other theorists of the earlier part of the eighteenth century, Stahl, Hoffmann and the many other so-called philosophers who reasoned by induction, and not physical observation. To all of them disease was but a disturbance of our dynamic, our soul life. Pathology had not yet laid bare the material nature of disease. Hahnemann argued as follows in support of his theory, as against the material nature of disease: "Washing the sexual organs, even if immediately and carefully done, never is a protection against infection by venereal chancre. A breath of air wafted over one afflicted with small-pox can call forth this horrid disease in a healthy child. . . . . Is it possible to admit the existence of material morbific matter and its transition into the blood in this and all such cases? A letter written in the sick-room and sent a great distance has often imparted to the recipient the same miasmatic disease. Can material morbific matter be thought of in this case as having permeated the humors of the body?" On the other hand he tells of dangerous bilious fever resulting from a mortifying altercation; of a superstitious prophecy of death coming true at a predicted time; of sudden news causing instantaneous death, and then concludes his summary with these words: "The defenders of an assumption so gross as that of morbific matters should blush to have so inconsiderately overlooked and misunderstood the spiritual nature of life, as well as the spiritual dynamic power of pathogenetic causes, thereby having degraded themselves to the level of medical scavengers who, instead of curing, destroy life by their endeavors to expel morbific matter from the diseased body, where it never existed."

I quote this sentence in full to illustrate the spirit in which the whole work is written. It contains any number of similar charges, assailing the profession on nearly every page with the severest accusations. In section 72, two classes of diseases are further defined, the acute, which "includes rapid morbid processes caused by abnormal states and derangements of the vital force," which run their course in a brief period, and the chronic, "which, in a manner peculiar to themselves, act deleteriously upon the living organism, dynamically deranging the latter," and are originated by "infection with a chronic miasm." In sections 78, 79 and 80 we are treated to a description of the miasms which are capable of destroying the equilibrium of our soul life in the specific way described. These are syphilis, sycosis, and lastly and most important of all, psora.

Syphilis, we are told, had been recognized as one of the chronic miasmatic diseases; but sycosis, and by that is meant "Feigwarzenkrankheit," or venereal warts, had not been previously so regarded, but we are assured that it possesses such properties. However, it is psora which is—and I quote literally from section 80—"the only real fundamental cause and source of all the other countless forms of disease figuring as peculiar and definite diseases in books on pathology under the names of nervous debility, hysteria, hypochondriasis, mania, melancholy, idiocy, madness, epilepsy and convulsions of all kinds, softening of the bones (rachitis), scotiosis and kyphosis, caries of the bone, cancer, varices, pseudoplasms, gout, hæmorrhoids, icterus and cyanosis, dropsy, amenorrhœa, hæmorrhages from the stomach, nose, lungs, bladder or uterus, asthma and suppuration of the lungs, impotency and sterility, sick headache (hemicrania), deafness, cataract and glaucoma, renal calculus, paralysis, deficiency of the special senses and pains of every variety."

Truly psora must be a thing to be feared. It is responsible for seven-eighths of all chronic diseases, and this category includes a variety of ills which makes one shudder to think of the afflictions that may be in store for him whom the psora miasm might strike.

There can be no question as to what Hahnemann understood by these miasms. We find many references to them in the Organon; section 204 will suffice. He says, after referring to them specifically: "Each of these must have pervaded the entire organism and penetrated all its parts before the primary representative local symptom peculiar to each miasm (itch eruption of psora, chancre and bubo of syphilis, and condyloid excrescences of sycosis) makes its appearance for the prevention of the inner disease."

But this will suffice as an answer to our first question.

Second, upon what theory must its cure be attempted? Diseases are called "natural," while every effort directed to their cure by the administration of medicines is said to create an "artificial" affection, a drug disease. It is argued, beginning with section 36, that similar and dissimilar diseases of varying intensity may coexist in the body. But to effect a cure we learn, in section 70, that of all methods of treatment directed to any disease, "the only really salutary treatment is that of the homœopathic method, according to which the totality of symptoms of a natural disease is combated by a medicine in commensurate dose capable of creating in the healthy body symptoms most similar to those of the natural disease; and as diseases are only dynamic disturbances of the vital force, they are overcome without additional suffering, and having been perfectly and permanently extinguished, they must cease to exist."

The manner in which the patient escapes from the conflict excited between the drug and the natural disease is further stated in section 29, which says, "by administering a medicinal potency chosen exactly in accordance with the similitude of symptoms, a somewhat stronger, similar, artificial morbid affection is implanted upon the vital power deranged by a natural disease; this artificial affection is substituted, as it were, for the weaker similar natural disease (morbid excitation) against which the instinctive vital force, now only excited to stronger effort by the drug affection, needs only to direct its increased energy; but owing to its brief duration it will soon be overcome by the vital force, which, liberated first from the natural disease, and finally from the substituted artificial (drug) affection, now again finds itself enabled to continue the life of the organism in health."

Next it remained to ascertain what drugs possessed this ability to create a so-called drug disease similar to the natural one. For this purpose Hahnemann adopted a plan suggested by Albrecht von Haller in 1771 of administering drugs to healthy individuals and noting the manifestations which supervened. This was called "proving a drug." Some fifty paragraphs are devoted to the directions to be followed in conducting these "provings." While in section 141 it is admitted that "the most desirable provings are those which the healthy unprejudiced physician has made upon himself," yet individuals of both sexes without regard to any medical qualifications were selected and permitted to record, of course with great exactness, any and every manifestation. "The physician should examine the report immediately after the termination of the experiment" we are told (section 139). Evidently not always the educated were selected as the testors, for it appears (section 140) that "if the prover is not skilled in writing, the physician should inquire every day concerning the nature of the symptoms."

The action of drugs was studied both as to their "primary effect," which was presumed to be an alteration of the "harmony of the vital forces" (section 63) and the later resulting conservative reaction described as an automatic activity of the vital force, and which is called the "after effect" or "counter effect." Of course only a single drug is to be administered, and it is truly remarkable that given in an attenuated dose how very long was found to be the period of its activity, and the multiplicity of symptoms it was said to produce.

Following a single minute dose of lycopodium, which is presumed to be inert and as such was and is dusted upon pills, there appeared a train of symptoms in number 1,608 of very remarkable character and continuing for a period of from forty to fifty days.

One decillionth of a grain of table salt awakened a frightful train of symptoms including headache, interference with sight and hearing, great gastric distress, nausea, vomiting, intestinal colic, a variety of menstrual irregularities, respiratory difficulties, dyspnœa, palpitation, and enough more to reach an aggregate of 1,349.

The various drugs we are told act not upon the material organism but producing their impression through the nervous system, they awaken the necessary dynamic changes. And, therefore, every part of the body endowed with sensitive nerves, is capable of receiving the influence of medicines and transmitting their power to other parts. Though the stomach, tongue and mouth are most susceptible to medicinal impressions, the lining membrane of the nose possesses this susceptibility to a high degree (section 289–90). So that in patients who are very excitable and weak, remedies may be administered by olfaction. Of the efficacy of this particular method of administering remedies, Hahnemann says, in note 149, he is convinced; being assured that the power of the medicine is at least of the same degree of intensity as when administered by the mouth; and should, therefore, be repeated at the same intervals. In that I rather think we can agree with him. But in whatever method administered the chosen remedy should be of such an attenuated strength, or rather weakness, that it should awaken the least possible reaction. And we are further assured in section 160 that the dose of no homœopathic remedy can be reduced to such a degree of minuteness as to make it powerless to overcome and to completely cure any analogous natural disease of recent origin and undisturbed by injudicious treatment.

The selection of the dose was in Hahnemann's mind a most important desideratum. He chose preferably the 30th dilution; in other words one decillionth of a grain of a crude drug or drop of a fresh vegetable juice.

Mathematicians have attempted to give us some conception of the degree of dilution thus attained. Munk puts it this way: A cubic foot of water contains 3,000,000 drops, a cubic mile 780,000 trillion drops, the earth contains 2,662 million cubic miles, and, therefore, has a capacity of 2,080 quinquillion drops. So that the 30th dilution, that is to say one decillion drops, has the capacity of a body of water equal to 480,769 worlds the size of our own. One drop of medicine in such a body of water, thoroughly shaken, yields wonderful results; one drop of a decillionth dilution of Indian currant berries produces hemiplegia, and one drop of a solution of table salt of the same strength will continue its effects, as above described, for fifty days.

Hahnemann himself must have been amazed at the results of his wonderful discovery, and as even he could not reason that these marvellous

properties were to be attributed to the material virtue of the drugs, he concluded that their effects must likewise be of that inexplicable dynamic character possessing to a rich extent the same spirit-like properties presumed to be the essential character of disease itself.

And so we find in sections 160, 269-270 this very plainly stated. Their specific virtues are imparted to the remedies by trituration or dilution. For example he writes: "Thus, two drops of the fresh vegetable juice mixed with an equal proportion of alcohol, are diluted with 98 drops of alcohol, and potentiated by two succussions of the hand, this is the first development of power (potency). The same process is then to be repeated with 29 successive vials, each vial to contain 99 drops of alcohol, filling three quarters of the vial; this second vial is then to be shaken twice, and so on to the 30th development of power; this is the potentiated decillionth old dilution, and the one to be commonly used." Now to quote again, "through this simple process, the powers hidden and dormant as it were in the crude drug are developed and called into activity in an incredible degree. In this way the medicinal powers, even of substances hitherto considered inert, are most effectually developed," and finally the clear explanation of all in section 269 reads: "to serve the purpose of homœopathy, the spirit-like medicinal powers of crude drugs are developed to an unparalleled degree."

Then in section 286 follows the equally remarkable explanation of the manner in which these dilutions impart their strength. "A homœopathic dose is augmented by increasing the quantity of fluid in which the medicine is dissolved, preparatory to its administration, while the actual quantity of medicinal substance remains the same. In using a solution of this kind, a much greater surface supplied with sensitive nerves, susceptible of medicinal influence, is brought in contact with the medicine." And finally in section 288 we are told in this liquid form, the medicine spreads through the organism with such inconceivable rapidity, that this effect may with propriety be defined as spirit-like, dynamic." And thus we have fully unfolded the theory of homœopathic practice as laid down by Hahnemann.

As to the claims made for it by Hahnemann we find stated in sections 24, 54 and 70 that the theories here presented are alone the true principles to guide in medical practice. It is not one out of many laws, but it is exclusively the law and that most emphatically.

It remains for us to see what has been the history of homœopathy since its early promulgation. It remained unchanged until the third decade of our century. Its success during the lifetime of Hahnemann was partially due to the period of its birth, which as has been seen was at a time when similar ideas of the nature of disease were quite prevalent, but particularly as his teaching was directed to the populace and satisfied their longings for something that possessed the air of being marvelous.

In 1822 homœopathic societies, journals and hospitals were established. The publication of his work on chronic diseases in 1828, in which he first promulgated his psora theory, led to a division in his own camp. This is readily understood when we find in this work the statement of the futility of his previous treatment of chronic diseases; admitting as he does, "that the beginning of the homœopathic treatment of these diseases was cheering, the continuance less favorable, but the termination has proven entirely hopeless."

Having lost faith in their leader, some went a step further, and so we find Hermann advocating instead of homœopathy isopathy. It was claimed that when certain organs were diseased it was necessary to give the invalid the corresponding organs of a healthy animal. Therefore fox liver was given for liver disease, fox lung for lung disease and fox brain for brain disease.

Soon we find Gross and Lux considering it necessary to give these organs in an extremely diluted dose, and finally the most repulsive absurdities grew into practice. Blood was given for blood diseases, the sputum of phthisis to consumptives, teeth to those whose own had become carious, and even worms to those afflicted with helminthiasis. Revolting as this may be, we will soon see that this practice has not entirely disappeared.

Recognizing the need of further reform in homœopathic therapeutics, Grüner and Honigsberger suggested larger doses. Kurz, Ott, Rapon and Barth introduced hydro therapeutics. Then came the advocates of gymnastics, mesmerism and animal magnetism. The mysticism surrounding homœopathy found in the latter a wonderful adjunct. But homœopathy received no support from these innovations, for while on the one hand, they exposed her shortcomings on the other, it was extremely doubtful, to say the least, whether their plan of action was based upon the "similar" doctrine.

But as with advancing years investigations in the field of rational scientific medicine developed pathology and physiology, it became apparent, that the ethereal dynamic conception of disease must be receded from by the homœopathic practitioners.

About 1850 Griessellich appeared in the van of homœopathy, and he was followed by Arnold and finally by Hirschel, who in 1854 published "A Sketch of Homœopathy from its new stand-point," The claim was then put forth that modern homœopathy is materially different from what Hahnemann taught, and that accepting and standing upon the great medical advances of the the day, it should be regarded as scientific. They

received the results of scientific investigation and substituted for mere symptomatic expression the pathological changes in the organs, as the essential feature of diseased processes.

Hahnemann's conception of disease was therewith abandoned but the law of similars was still maintained. And now we find asserted as the modern conception of homœopathy by W. Stens, Jr., Griessellich, W. Sorge and Gutwill: That there are certain classes of medicines which affect a number of organs and tissues, influencing their action; and that they are to be prescribed for the diseased organs which they are presumed to alter. But despite the wealth of their therapeutic armamentarium, no homœopath has yet shown that any drug was able to excite a pneumonia, an emphysema, a collection of water or pus in any cavity of the body, or that any liver, heart or kidney disease has ever been awakened in a previously healthy man by the administration of a homœopathic remedy.

It has been claimed for certain specific drugs that they do produce pathological conditions similar to those for which they are prescribed. Thus mercury has been known to awaken a diarrhœa, and, again, mercury and constitutional syphilis sometimes act alike. But what of the dose? Will any one pretend to say that the persistent or appreciable administration of a drug, perhaps in even poisonous doses, is to be followed by the same effects as when it is given in a millionth, or worse still, in a decillionth part? More than this, can it be said that the pathological changes in diarrhœa and those following mercurial poisoning are identical?

The recent efforts of homœopathy to reconcile the positive findings of the pathologist with their views have proven more futile than was the case in the early days of Hahnemann when speculation was, if not legitimate, yet the quite universal practice. As to the proving of their remedies upon healthy individuals, the methods pursued are to-day identically the same as those of old. Baer's work on digitalis, which, to quote a homœopathic writer, is to be regarded as "unquestionably the best and most scientific work" of its kind. In it, among other symptoms, he records a sharp nasal catarrh occurring ten days after taking the last dose; accompanied with a pain in the head and arms; and, as the last effects, dull pains in the chest and sharp fleeting pains in the head seventeen days after discontinuance of the drug. Clotar Miller, in a popular work on medicine from the homœopathic standpoint, describes in his chapter on diseases of the mouth, fifty remedies, the selection of which hinges upon the alteration of taste and in the coating of the tongue. His chapter on cough and toothache indicate that a remarkably fine acumen is necessary to discern their special character and the choice of the suitable remedy. Then follows a list of specifics for the cure of hernia, caries, tumors, including carcinoma, and like Hahnemann prescribes a different line of treatment for the psychical diseases as they are caused by fright or fear, hate, love or jealousy; or may be announced by a shriek, oaths or curses; or yet again find their expression in absent-mindedness, talkativeness, laughter or tears.

One of the most remarkable of recent literary productions is the address of Lutze, which was delivered at the Hahnemann memorial services in 1872, and which has reached its forty-second edition. It appears that a man æt. 72 was cured of persistent vomiting by giving him a glass of water which the writer had magnetized by holding it in his right hand. From which he concludes "that if pure water can be so enriched in medicinal virtue by simple contact with the hand as to cure a disease of years' duration, how much more must this power grow if a properly diluted drug, whose peculiar powers experience and provings have taught, be subjected to constant shaking in the hand, until it becomes enormously efficient." Further he says: "The poisonous properties are removed from a drug through its dilution, while its special peculiarities, so to speak its soul, remains and by rubbing and shaking becomes vivified and strengthened by human magnetism."

Stens, Jr., Grauvogl and Heinigke argue that the intensity of a drug affection is not dependent upon its quantity, but upon the extent of surface to which it is exposed, and hence is increased by its trituration.

Heinigke proposes the remarkable explanation that the atomization or molecular fission, as he sees fit to call it, is the essential thing which frees the given drug of the laws which govern it during the period of its affinity. And therefore he argues, and this in 1871 in his "Principles of Homœopathy," that drugs become specifics only after they attain free molecular form, while in the state of their chemical affinity they have only chemical effects.

Grauvogl (1870), returns to the old teaching of Hahnemann, for, asks he, "Has any chemist weighed the quantity of atmospheric air required to be inspired, necessary to produce cholerine, cholera or typhus, how much miasma until intermittent is produced? As it cannot be established that the severity of disease is dependent upon the quantity of *materies morbi* introduced, therefore it is much more absurd to maintain that the quantity of medicine administered is to regulate the effect desired to be secured."

These are quotations from recent homœopathic literature, and yet they tell us that modern homœopathy is quite a different article from that offered by Hahnemann. If this be so, I have failed to discern the difference.

Even isopathy has been regenerated. I have in my possession a "catalogue of morbific prod-

ucts, nosodes, and other remedies, in high potencies, by Samuel Swan, M.D., 1886," which any of you may obtain by writing for it to 13 West 38th St., New York City. It bears the famous insignia, "*similia similibus curantur*," and the mystic words, "simplex simile minimum." It is furthermore stated in italics: "Morbific matter will cure the disease which produced it, if given in a high potency, even to the person from whom it was obtained." It is at once the most remarkable and most revolting, the most incredible and infamous production, that has ever been launched upon a suffering community. It contains a list of about 1,000 pills, which includes a group which would readily awaken, perhaps, a cynical smile from the unbeliever. Such as pills containing alcohol, aqua pura, Buffalo lithia, electricitas, ether, ice, "tears of a young girl in great grief and suffering," magnet moonlight, and finally, those made "from a silk handkerchief eaten by a cow and taken from the stomach in a hard ball, during the three years she never had a calf."

All this might do very well and be regarded as a great joke, were it not for the far greater list of such revolting matter as: renal albumen, lice insect, renal calculus, kidney of Bright's, carbuncle pus, condylomata, diabetic sugar, diphtherine, otorrhœa syphilitica, body and head lice, pus from caries, rectal abscess, cancer of uterus, breast, pylorus and face, syphilinum, tinea syphilitica from a patient with tinea capitis, "menstrual blood from a woman with warts," vomit from a yellow fever patient, and so on.

Think of administering such vile excrementitious and pathological products under the name of medicine, under the cover of practicing the healing art, and if the thought is not revolting, if the possibilities to which these homœopathic notions, if followed to their legitimate conclusions, can bring us, is not appalling, then there is nothing frightful in nature.

Perhaps, however, no more truthful picture can be seen of homœopathy, both in what she pretends to be to-day and what in reality she is, than can be drawn from the report of the annual meeting of the New York Homœopathic County Society held on January 9, 1890.

The President, in his address, makes several assertions which history will hardly warrant. Amongst other statements he says: "Since all other means have failed to destroy homœopathy, its opponents have now raised the cry that it is sectarian. . . . . But this, like all past attempts to injure this school, is doomed to the same inevitable failure. . . . . For sectarianism in the beginning was forced upon homœopathy. If when the law of *similia* was first promulgated by Hahnemann, it had been accepted by the profession as one law of cure, even of little importance, it would have advanced the therapeutics of the old school many years, but would have prevented the formation of a sectarian school. . . . . Shall we then, at the dictum of the old school and the few discontents in our ranks, tear down the bridge which has carried us safely over? . . . . The time has not come for this. When the dominant school of medicine accepts the law of *similia* as one of the laws of cure; when the principles of homœopathy are taught with others in their colleges; when homœopathic physicians and surgeons are admitted upon an equal footing in their societies and given the same recognition in their hospitals and public institutions; when the ban which has been laid upon all followers of Hahnemann has been removed—then, and not until then, can we afford to give up our distinctive title. They who first forced us into sectarianism must give us a more cordial invitation to return to the fold before we can with honor accept."

In our review of the Organon and its principles to-night has there appeared a single claim to this position? Hahnemann himself was the one to proclaim that the doctrine of similars was an exclusive, a sectarian dogma. It was he who maintained that it alone was the correct principle of practice, and through its application only could cures be effected. He not only did not desire that it should be recognized as "one law of cure, even of little importance," but he insisted that it was the law of cure of all importance. He recognized no other plan of treatment, and the manner in which he assailed and abused those who decidedly opposed him, the titles of "renegade" and "mongrel" he applied to his followers who prescribed the tenth and not the thirtieth potency, indicate only too well how utterly untenable is the position of Dr. Norton. What claims has homœopathy to recognition by the "dominant school?" During the one hundred years that have passed since Hahnemann wrote his first dissertation upon homœopathy, not one single scientific fact, not one single medical or surgical truth has been added to our professional knowledge by the homœopathic practitioners.

Its struggle has been one for existence. It has pursued a defensive and not a progressive policy. Those who at heart are homœopathic practitioners must stand upon the same ground as did Hahnemann at the beginning of this century. As is apparent in the recent homœopathic works I have quoted, homœopathy to-day is in its fundamental thought the same obscure mysticism—the teaching of the immaterial nature of disease and its causes and the interpretation of the mystic and dynamic action of remedies.

If homœopathy in this sense does not exist, then most certainly it does not in any other. How true this latter sentence is, is answered by the further report of this same meeting of the New York Homœopathic Society.

Following the President's address was a paper by Dr. J. W. Dowling, Professor of Clinical Med-

icine and Diseases of the Heart and Lungs at the New York Homœopathic Medical College, on "La Grippe." He asserts that the germ theory furnishes the only plausible explanation of the origin of the disease. He draws the line between croupous and catarrhal pneumonia. He explains the increased death-rate of croupous pneumonia to be due not directly to the prevailing epidemic influence, but to the "specific organic poison" that develops croupous or lobar pneumonia and nothing else. The system may be run down by influenza, and brought so far below the ordinary level of health, that the germs of croupous pneumonia now become active and develop their peculiar disease. The same, he says, may be said of malarial illness, of typhoid fever or any infectious disease. The case, he argues, is different with catarrhal pneumonia, which he says is always preceded by a bronchitis, and owes its cause to an extension of the inflammation from the lining of the minute bronchial tubes, and so he goes on.

Truly this is the kind of homœopathy that Hahnemann did *not* teach. Then followed a discussion upon the treatment. The most diversified views were presented, and amongst them one practitioner advocated 20 gr. doses of baptisia, which another insisted was not homœopathic, while a third, *mirabile dictu*, admitted that he was using antipyrin in 10 gr. doses.

As a matter of fact Dr. Guernsey, one of the foremost of the so-called homœopathists in New York, is no doubt correct in saying, that there is to-day no exclusively homœopathic practitioner in New York City.

It is not my intention at this late hour to read a panegyric of the work performed during the life period of homœopathy, in the field of scientific medicine. Advancing from the eighteenth to the nineteenth century, she stepped as it were into a new life. Emancipating herself from the chains of speculation, there opened before her an era of real study and observation. No mere statement of symptoms, real or fancied, from the lips of some enthusiastic, imaginative, or yet even earnest physician or, worse still, some neurotic or illiterate patient. But there came a time of earnest, hard study. The French school led by their progressive Bichat, who made in a single winter 700 autopsies, and who, though forced to succumb to phthisis in his 31st year, had lived, in those few years, a life so useful that he impressed himself upon medical history for all time. Here was laid the foundation of real medicine. No longer could disease be presumed to be a myth. New methods of study were introduced. Percussion, announced to the profession by Auenbrugger, was given a permanent place by Corvisart, whose student Lænnec enriched the art of physical diagnosis by the discovery of auscultation. The French school was reinforced in their efforts by the one in Vienna, and Rokitansky and Skoda completed the establishment of realistic medicine. New methods of clinical study were introduced; urinary analysis was undertaken, the clinical thermometer told and foretold the course of febrile affections, and the most careful methods of diagnosis were made possible as the true nature of disease was unfolded. Physiology taught us the manner in which we live and gave a more material explanation of our existence than was presumed to be its cause, when "dynamis" ruled supreme. The germ theory of infectious diseases, first advanced in 1836 by Latour, found careful students and cleared away the mysticism enshrouding these affections, which were so inexplicable to Hahnemann, until now, with the light shed by the labors of Koch, we understand more thoroughly the means of their production. Chemistry, which during our century has grown to be a recognized science, has joined hands with microscopy, and to-day there can be isolated not only the pathogenic microörganisms but those infectious chemical poisons, the ptomaines. On every side scientific medicine has steadily progressed, and with each advancing step has dealt a death blow to the pretensions that disease is an immaterial, spiritual manifestation.

Facts and discoveries accumulated so rapidly that no single individual could master them all. Special fields of study were entered upon, and soon unheard of realms were being explored. Gynecology, ophthalmology, laryngology, dermatology and diseases of the nervous system, were all substantially unknown until the present century.

It is said that homœopathy has greatly advanced the study of the physiological action of drugs. The medical literature of the close of the last century teems with the productions of this sort. Koeppe in his *brochure* referred to presents a list of works, showing that before the era of Hahnemann studies of this character were by no means rare. But who will say that the records of the Hahnemannian kind, made in the most unscientific manner and through the most ignorant agencies, based upon presumptions which medical progress laughs to scorn, have been of any real service to physiological medicine? Look to the text-books. Does Brunton or Wood make the first suggestion of any fact homœopathy has ever adduced?

And what shall we say of surgery, that not only kept pace in its pathology, but which has taught us how to render the sufferer unconscious while severe operative procedures are undertaken; has, guided by unerring progress, with a certainty born of positive knowledge, dared to invade the most sacred cavities of the body and remove existing disease? Where can we read a more conclusive argument against the immaterial dynamic nature of disease, than in that chapter unfolded by Lister on antiseptic and aseptic surgery?

But I must close.

If in the medical history of this century, one fact stands out more prominently than does another, it is that the age of dogmas, of systems, of speculation, is passed, and that medical science, broad and progressive, cannot be compressed into the narrow confines of any creed.

And now we are told that the name "homœopathy" should be changed and that of the "new school" adopted.

For a school that was the exponent of a mystic, ethereal idea, whose absurdity has long ago been proven; for a school existing for a whole century, in the midst of tremendous advancement in every department of learning and science, which throughout its whole existence has not added a single truth, but which has decade after decade been made to realize the growth of scientific medicine and admit its own folly; for such a school to now claim the title of "new" is indeed presumptious. Which is the new school? the one that stands as the last representative of the mystic systems of the eighteenth century, or the one that is broad and progressive as knowledge itself?

Let history answer.

ORIGINAL ARTICLES.

CASUISTRY IN OBSTETRICS.

Read in the Section of Obstetrics and Diseases of Women, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

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Casuistry is a word much less used now than formerly; but though the times change and we with them, the idea that the word expresses abides, and will continue as long as the race. Nay more, as the relations of human beings become more complex, and as the boundaries of science are extended, so the sphere of duty grows, and questions as to human conduct multiply, and often are more difficult of answer.

The word casuist was more especially applied to theologians occupied in resolving questions of conscience, and the famous order of Jesuits has probably stood most prominent some centuries in giving special study to casuistry. The disrepute into which the words have fallen has been attributed to Protestant revolt against alleged religious abuse of casuistry and of the office of casuist. It should, however, be remembered that before the Catholic church sought to give light to its suppliants in doubtful problems of duty, Cicero, as Voltaire has remarked, discussed in his *De Officiis*, some of the most difficult questions, and that long before him Zoroaster gave as one of the best guides in making human conduct correspond with the claims of conscience, this maxim: "In doubt as to whether an action is right or wrong, abstain."

Admirable as Zoroaster's rule is, it may fail of adaptation in many of life's emergencies, and its light go out, leaving us in the darkness. Not to resolve may be to resolve; we may be compelled to do one of several things, being unable to fold our arms and reject all, because we do not know which is best. This is true in obstetric practice quite as much as in any of the departments of medicine.

One of the most eminent of Scotch moralists and metaphysicians, Reid, wrote as follows: "There are some intricate cases in morals which admit of disputation; but these seldom occur in practice, and, when they do, the learned disputant has no great advantage, for the unlearned man who uses the best means in his power to know his duty, and acts according to his knowledge, is inculpable in the sight of God and man. He may err, but he is not guilty of immorality." Here the writer admits that questions of casuistry do occur, and he also claims that if one does wrong after faithfully seeking to find out what is right, he is blameless; a conclusion that does not correspond with the generally received axiom, "ignorance of the law excuseth no man."

Let no one imagine that casuistry seeks evasion of the law, the compliance with its letter while its spirit is violated; and that the dominion of right is set at naught by quirks and quibbles such as lawyers sometimes use to secure the escape of the guilty. Undoubtedly men and women have made it a cloak with which they have sought to hide the nakedness of crime, as for instance, a wife who excused her adultery on the ground that while she resigned her body to her lover, her lips with which she had made vows of fidelity to her husband, were not touched. But such or any perversion of casuistry cannot weaken its power, or destroy its necessity. That necessity, as De Quincey has said, can be deduced from the very origin and genesis of the word; it is from *casus*, a case, and is really the science of cases. "After morality has done its very utmost in clearing up the grounds upon which it rests its decisions—after it has multiplied its rules to any possible point of circumstantiality—there will always continue to arise cases without end, in the shifting combinations of human action, about which a question will remain whether they do or do not fall under any of the rules. And the best way for seeing this truth illustrated on a broad scale, the shortest and most decisive is—to point our attention to one striking fact—viz.: that all law, as it exists in every civilized land, is nothing but casuistry." The enactment of laws, their enforcement, and the trial of civil and criminal causes, furnish at once proofs and illustrations of casuistry. Science is perpetually propounding new questions in casuistry, or demanding new answers to old ones. And this is true in medi-

cine. Another truth is this: in medicine the elements of time and place are often concerned in the responses to casuistical questions.

Writers of systematic works upon moral philosophy have quite frequently presented questions in casuistry. Among those which Kant propounded but left unanswered, were two at least which belong to medicine. The first was, "If a man has been bitten by a mad dog, and recognizes the symptoms of hydrophobia, ought he not to destroy his life, lest when the disease is fully established, he may injure others?" The second question was this: "The propagation of the species being Nature's object in cohabitation, ought this to take place when the purpose is impossible, as in pregnancy?" The latter question, as well as the more important one which from time to time is so often made matter of professional discussion, "May sexual intercourse occur and nature's purpose be thwarted by either party?" belongs to the casuistry of obstetrics.

It certainly is discouraging to one who seeks a universal and immutable foundation for morals, and therefore immutable and universal laws for the government of human conduct, to find the same question differently decided in different ages and by different peoples. When the elder Cato was asked what he thought of usury, his reply was, "What do I think of murder!" But to-day the most enlightened people regard usury as just and right. Pascal's words were an exaggeration, but no one can deny their expressing partial truth: "In the just and the unjust we find hardly any thing which does not change its character in changing its climate. The degree of the elevation of the poles reverses the whole of jurisprudence. A meridian is decisive of the truth, and a few years of possession. Fundamental laws change. Right has its epochs. A pleasant justice which a river or mountain limits. Truth on this side the Pyrenees, error on the other." Obstetric art presents at least approximate illustrations of some of the points referred to by the great French philosopher. When gastro-elytrotomy was revived by Dr. Thomas, and at the outset gave promise of brilliant success, the wise veteran obstetrician, Fordyce Barker, publicly remarked that if the value of the operation were established the subject of obstetric ethics must be re-studied. Outside of the United States the operation is scarcely known in practice, and one of the greatest of European obstetricians, Winckel, has recently said that it has no future. Porro's operation belongs almost exclusively to Italy, as also symphysiotomy, though the recent declaration of Mr. Tait in favor of the former will give it a wider acceptance. The recent successes of that operation and of Cæsarean section open questions which our fathers believed were settled.

The treatment of ectopic gestation in its early period is one of the pressing questions of the hour. In this country faradism has the support of some of the most eminent in the profession, while abroad it meets with hardly any favor; on the other hand, there are in Europe some distinguished authorities who advocate and practice injection of morphia into the ovum, a treatment never employed in this country.

The progress of science offers new questions in casuistry to the obstetrician. In illustration, the ophthalmologist discovers albuminuric retinitis in a pregnant woman, and announces to the obstetrician that her continued pregnancy is at the peril of her vision, possibly of her life. What answer is the latter to make, what conduct pursue? This question will be considered in the course of the paper; its present introduction was only to illustrate, as was stated, the fact that progress in science inevitably originates new problems in practice.

Passing from these references to time and place, and the advance of science in their relation to casuistry, permit me now very briefly to consider some of the questions that may be presented the obstetrician as a casuist. Let us take first that propounded by Kant, as to cohabitation in pregnancy. I have more than once made earnest protest against this indulgence as injurious to the pregnant woman in many instances physically, as often repulsive or odious to her, and then and thus an injury to her moral nature; it is neither needed nor desired by her, and it has its origin, not in exalting love, but in degrading lust. Marital continence purchased by a wife's indifference, aversion, suffering, possibly peril to her own life, or that of her unborn offspring, is held by a mere rope of sand, and the first strong wave of passion may forever sweep it to ruin. It ought to be impressed upon man that woman when pregnant should surely be treated as well as animals in a similar condition are, and that continence for months, or even for years, is a possibility and no injury.

Means to prevent conception in married life are asked of the physician. Admitting his knowledge of such means, means that though intercourse takes place are certain to prevent its legitimate result, can he inform married men and women? Laws are frequently so made that much is conceded to human weakness, the standard of legal enactment not formed for perfect beings, but brought down to the level of the intellectual and moral development of its subjects. Even Divine law has stooped to the moral imperfection of man, for did not the great Teacher assert to the Jews that the conditions of divorce were lowered by Moses on account of the hardness of their hearts?

Moreover, let it be recognized that frequent childbearing is in some causing rapidly failing health and strength; that children come faster than the means to properly care for them is ac-

quired; that infants are born with feeble organization, or tainted with hereditary disease, and as time goes on they may prove to be defective in mental power, or of bad moral character, so that one involuntarily says, better they were dead than living, or better they had never been born.

Nevertheless, all the condescension of law acknowledged, and these conditions of fact admitted, and even though we may not believe that the back is always given strength for the burden it must bear, or the wind tempered to the shorn lamb, the physician takes a great responsibility who endeavors to thwart Nature's law—*lex, lex dura, sed lex*. If there are instances in which the physician ought to impart such knowledge, they must be exceedingly rare, and the nicest casuistry is necessary. The consequence of this knowledge, while it may protect woman from danger, and society from harm, does not exalt, but degrades, man; he has no restraint upon his passion, while his conscience, reason and will are thus weakened; continence, the sure way of avoiding conception, is no evil to his body, and exercised for his wife's health and happiness, ennobles him, exalting his spiritual being. This may be the voice of one crying in the wilderness, but ultimately it will be heard and heeded.

The knowledge given in those cases in which it may seem to be necessary, will not be kept secret by the parties informed, but will be imparted to others who have no just excuse for avoidance of childbearing. It will become general, and thus a strong defence to female virtue is taken away, and the purity of countless lives and the peace of countless homes be sacrificed upon the altar of man's unhallowed lust.

I have no right to put into the hands of another a loaded pistol when there is a probability he will use it for suicide or homicide. We are morally responsible for imparting knowledge when we know it will be used for evil. The recognition of this law by Galen was commended by the illustrious Sir Thomas Browne, in his Pseudoxica Epidemica: "We commend the wisdom and goodness of Galen, who would not leave unto the world too subtle a theory of poisons; unarming thereby the malice of venomous spirits, whose ignorance must be contented with sublimate and arsenic."

The profession generally recognize the law that when pregnancy seriously imperils a woman's life, abortion is justifiable. But suppose the peril be not to life, only the integrity of an important organ is threatened; may the physician end the pregnancy? My friend and colleague, Dr. Wm. Thompson, informs me of his having been consulted some years ago in the case of a pregnant woman because of impaired vision. Upon examination he found albuminuric retinitis, and informed the family physician that longer continuance of the pregnancy would cause permanent injury. The pregnancy went to term, the mother becoming hopelessly blind. It is generally conceded by both ophthalmologists and obstetricians, that such condition of the eyes in a pregnant woman demands the induction of premature labor. Let us remember, however, that premature labor is a sort of compromise, for the infant mortality is very great; in one-third to one-half the cases we, by it, only succeed in preserving the child's life for a few days or a few weeks.[1] Bearing this fact in mind, are there not cases of albuminuric retinitis in pregnant women which justify, not merely consent but desire being expressed by the sufferer and her friends, the physician in ending the pregnancy even by procuring abortion?

Craniotomy upon the living fœtus has been for years the subject of much professional controversy. One of the most recent utterances upon the subject is by Mr. Tait, who after three successful cases of amputation of the pregnant uterus—the so-called Porro operation—having previously had four fatal cases of Cæsarean operation, one of them having been done seven years ago according to the method now claimed by Sänger as a new operation. The great Birmingham surgeon predicts that this amputation "will revolutionize the obstetric art, and in two years we shall hear no more of craniotomy and evisceration, for the new method will save more lives than these proceedings do, and it is far easier of performance." In a footnote he admits craniotomy for hydrocephalus. Destruction of the life of the fœtus may be necessary in other pathological conditions besides hydrocephalus; thus there may be ascites presenting delivery, or the child may be a monster.

Beside these cases, the practitioner may be called to one of neglected shoulder presentation, and the forerunners of uterine rupture are at hand; or to a case of face presentation, posterior rotation of the chin having occurred, and delivery impossible through the natural passage without the head is lessened. Uterine rupture may be threatened in simple pelvic narrowing, or from unusual size of the head, or from too advanced ossification of the cranial bones. Now the general rule of treatment accepted by obstetricians, is that in case there is imminent danger of rupture of the uterus, embryotomy is to be done at once. Some time since I was sent for to perform craniotomy, the mother having previously given birth to three or four living children, though the labors were long and difficult in consequence of some contraction of the pelvic inlet. But the child was living, the condition of the uterus normal, and the woman's strength good, and I declined to do the operation then, though the family were quite willing, rejecting the suggestion of a graver

[1] It is, however, highly probable, if not absolutely certain, that when the *couveuse* and *gavage* are more generally used in the case of feeble, prematurely born infants, mortality will much decrease.

one, and left the patient with the gentlemen in attendance, one of them an obstetrician of skill and large experience. Eight hours afterwards I was sent for again, and found a woman dying from ruptured uterus; the physician recognizing the injury, had endeavored to deliver by podalic version, but the head could not be brought through the superior strait until craniotomy was done. Could that result have been foreseen, there was a time when the lessening of the fœtal skull, supposing the woman and her friends to have refused abdominal section, would have saved her life and been justifiable.

Here I wish briefly to refer to a rarely occurring condition which involves one of the most painful, serious and difficult questions in casuistry. Three facts in illustration will be given. Thirty-nine years ago, when first coming to Philadelphia to attend medical lectures, my preceptor took me to the residence of one of the professors in the medical department of the university, a former fellow student of his. In the conversation that ensued between the two gentlemen this medical teacher narrated an obstetric case that he had just attended. The patient was the wife of his coachman, and had a deformed pelvis. The honored Professor of Obstetrics in the university, the late Dr. Hodge, was called, and, after performing craniotomy, delivered the child; but upon being born it cried vigorously, and the narrator said that he instantly took the crotchet and thrust it through the opening in the head into the medulla. A very eminent American obstetrician was called to a case of labor in which delay arising from rigidity of the os, the gentlemen in attendance had done craniotomy. By the advice of the consultant the woman was given morphia, and after a few hours' rest labor pains were efficient and the os readily yielded. Before the birth of the child, however, recognizing that it had survived the mutilating operation, he destroyed its life, those by whom he had been called in consultation consenting. I myself once performed craniotomy in a case in which I was assured by the physicians who had been in attendance several hours that the child was dead. The os was perfectly dilated, the presentation normal, but the head did not engage and uterine action almost ceased, the patient showing symptoms of exhaustion. Some minutes after the child was delivered it made a slight movement and emitted a faint sound. I took it into an adjoining room—no repetition of sound or movement; but that there might be no doubt I repeated what one of my honored teachers, long since in his grave, said he had done. I could think, in the emergency, of no other guidance. Let me repeat that this is one of the most painful, serious and difficult questions in the casuistry of obstetrics.

Those who justify craniotomy upon the living fœtus do not all agree as to the pelvic narrowing which forbids it, and renders abdominal section imperative. For example, a very distinguished British[2] obstetrician in a recent contribution to the subject states in one place that the conjugate must be two inches at least, possibly two inches and a quarter, to justify craniotomy, but elsewhere he distinctly states that he "would not hestitate to perform Cæsarean section upon a patient with a conjugate of two inches and a half, and of course under, feeling that her chance of survival would be just as good as after a difficult cephalotripsy." My own conviction is that the opinion expressed is right; only an expert in operating and with all facilities for operating, and when the operation is timely so far as the strength of the patient is concerned, is likely to save the mother's life when the conjugate descends to two inches, or near it. Thefore in the mother's interest abdominal section is indicated in such narrowing.

One portion of Dr. Phillip's interesting paper considers the degree of pelvic narrowing which is to be met by the induction of premature labor, and his conclusion is that this is indicated if the conjugate is two inches and three quarters to three inches. Thus it will be seen that comparing the less figure with the greater that he gives for the Cæsarean operation, two inches and three quarters with two and a half, this restricts craniotomy to one quarter of an inch—a limitation that is so near a victory in this field for those who condemn craniotomy upon the living fœtus, that final success seems almost attained. In the course of the paper referred to, the author presents a question in casuistry which is remarkable not in itself, but in the ambiguous answer given. Let there be two women, each having such pelvic deformity that a living child cannot be born, but delivery can be safely effected by craniotomy; one of them is poor, and cannot take suitable care of a child, and therefore does not desire one, while the other is in comfortable circumstances, and desires to have a living child. "The question then arises: Ought an obstetrician to be in any way guided by these maternal desires? A direct answer is necessarily difficult, and would vary in different cases. My own opinion is that provided they be consistent with the practitioner's course of procedure, they should not be passed over." One is reminded of the answer made by the Delphic oracle: "If Crœsus should make war upon the Persians, he will destroy a mighty empire." Encouraged by this reply he made war upon the Persians, and a mighty empire was destroyed, but it was the empire of Crœsus, not of Cyrus. If consistent with the practitioner's course of procedure these desires should not be passed over! One practitioner will perform craniotomy in both cases, and another abdominal section; the

[2] Dr. Phillips, British Medical Journal, June 1, 1889.

one procedure will respect the desires of one patient and the other those of the other patient.

Three recent successful Cæsarean operations in Philadelphia, one by Dr. Goodell, the second by Dr. Kelly, and the third by Dr. Anna Broomall, give promise that the future American statistics for this operation will be much more favorable than they have been. But just as in the past years one occasionally heard of a woman escaping ovariotomy by giving birth to a child, in defiance of the diagnosis, so now there will be instances of women who in their perversity disappoint Cæsareans by the same natural process. Yet errors of diagnosis and proposed treatment put aside, there can be no question that craniotomy is steadily having its field more and more restricted; nevertheless that it will entirely disappear unless for hydrocephalus, and that according to Mr. Tait's prediction in two years, few are sanguine enough to believe.

What ought we to tell a patient when election must be made between craniotomy and a Cæsarean section? Answering from Leopold's statistics, 8.6 per cent. perish, whereas only 2.8 per cent., or a little more than one fourth as many die after craniotomy. Theoretically all the children are saved by the Cæsarean operation, but Leopold's statistics show that 13 per cent. are lost. These are the facts from which her conclusion may be drawn, not urged, but only advised by the obstetrician as to which he believes the better. It is probable the majority of women will select that which is least perilous to their lives.

It is probable that amputation of the pregnant uterus is destined to occupy a more prominent place than it yet has, and it may be a large experience, and that of many, will confirm the position which Mr. Tait has assigned it. The simple method of performing it advised by him, will certainly commend it to all practitioners. He declares it "the easiest operation in abdominal surgery, and every country practitioner ought to be able and always ready to perform it. No special instruments are required—nothing but a knife, a piece of rubber drainage tube, two or three knitting needles, and a little perchloride of iron."

The future will soon answer the question as to whether hysterectomy or hysterotomy will save the larger number of patients, and have a mortality more nearly that of craniotomy; by that answer the obstetrician will have clearer guidance than he now has in one of the most important questions belonging to the casuistry of obstetrics.

INTUBATION IN ITALY.—The first intubation of the larynx for croup in Italy was recently performed by Dr. Egidi, of Naples, who still holds that tracheotomy is usually the preferable operation.

POLIOMYELITIS ANTERIOR ACUTA.

Read in the Section of the Diseases of Children at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY S. P. DEAHOFE, M.D.,
OF POTSDAM, OHIO.

When I received a letter from your President inviting me to write a paper for this Section I was at a loss for a subject to write upon. A short time after, while sitting in my office, a little boy came limping into the room; his atrophied leg with marked talipes valgus at once attracted my notice and suggested a subject. Although a difficult one to write upon on account of my limited experience with the disease, five cases only having fallen under my personal observation, it has been an exceedingly interesting as well as a painful one, and if I can say anything that will call forth a discussion that will throw more light on the nature and treatment of this malady I shall feel myself doubly repaid. I refer to poliomyelitis anterior acuta or infantile paralysis as it is commonly called. I shall confine myself to a consideration of the disease as found in early life, recognizing at the same time that the disease is encountered up to sixty years of age.

Poliomyelitis anterior acuta, as the name implies, is an acute inflammatory affection of the anterior cornua of the gray matter of the cord, the ganglion cells probably being the starting point. As yet there is very little known concerning the etiology proper other than it is to be found during the first three years of life. Various causes have been assigned such as cold, dentition, summer heat, acute febrile affections, the exanthemata, traumatism and a specific agent as yet an unknown member of the pathogenic bacteria.

Cold, as well as dentition and summer heat must be assigned as doubtful causes. Cold certainly can no more act as a causal agent than it does in rheumatism and pneumonia. A causative relation is supposed to exist between the affection and the exanthemata owing to its frequent occurrence during convalescence from them.

Loomis classifies traumatisms with the doubtful causes, but Jacobi says they have a more decided influence than is generally assigned to them. As to a specific microbe being the cause, nothing definite is known but the theory, to me, seems plausible. That a specific germ may gain entrance to and affect the motor regions of the cord is not impossible. Hydrophobia and tetanus are examples of the predilection exhibited for the motor regions by some specific infecting agent.

That the influence of heredity cannot be traced is an important negative fact.

Important changes are found by the aid of the microscope in the anterior horns of gray matter in the cervical and dorso-lumbar enlargements, consisting of an inflammatory softening. In the early stage all the changes of acute interstitial inflammation will be seen.

Later new connective tissue is developed and a sclerotic process is established, the multipolar ganglion cells have wasted and many have disappeared while those remaining are in various stages of degeneration, some have lost their processes and remain as irregular spherical masses of pigment. Whether poliomyelitis anterior acuta is an interstitial or a parenchymatous inflammation, the most careful microscopical examination fails to decide. The majority favor the view that the starting point is in the ganglion cells. Hyperplasia of the neuroglia in the anterior columns results in more or less atrophy of the nerve fibres. The anterior nerve roots are thin, atrophied and translucent and more or less degeneration takes place in the filaments of the peripheral nerves. The muscles which are implicated undergo serious alterations which consist in fibroid changes and atrophy; sometimes they undergo fatty degeneration. The bones of the paralyzed members are retarded in development and the tendons become atrophied. Important changes occur in the joints; the ligaments are relaxed, the articular surfaces atrophied and the articulations relaxed by reason of which great deformities are produced.

The usual onset of the disease is a fever which lasts two or three days or even more, but it may begin abruptly; the child goes to bed in the evening perfectly well, sleeps quietly through the night and awakens in the morning paralyzed. The fever may be accompanied with headache, backache, pain in the extremities, vertigo and even convulsions; or there may be merely nausea and vomiting. The paralysis is almost always at its maximum when first discovered. Most frequently the muscles of one or both lower extremities are affected; according to Duchenne, the right more frequently than the left, in the proportion of twenty-five to seven. Other observers have noticed it more frequently of the left. Four out of my five cases were of the right lower extremity. Sensibility is not affected.

The bladder may participate in the paralysis, and the urine be retained, as in my first case, or there may be incontinence; but the bladder is not permanently affected. Smith says: "The bladder and lower bowels remain unaffected, since only the muscles of volition are involved;" but as will be noticed in the history of my first case, the bladder is sometimes affected.

The tendon and other reflexes of the paralyzed parts are lost and the electro-contractility to the Faradic current is abolished. The temperature of the affected parts falls below normal, the parts being cold to the touch.

The number of muscles paralyzed varies in different cases. Only a single muscle or group of muscles may be affected, again both extensor and flexor muscles of one or more limbs may be affected. The single muscle most frequently affected is the extensor longus digitorum, and the group most frequently affected is the extensors of the toes and the flexors of the foot.

The following is a typical case:

Case 1.—Aubrey D., aged two years and ten months. Previous to present sickness, which occurred in September, 1882, he was in perfect health, had never had any serious sickness, nor any recent injuries. His mother noticed that the child was not as playful as common, that he did not amuse himself, that he was inclined to sit, rather than run about playing with the other children. Upon urging the little fellow to go and play he replied that he could hardly walk.

My attention was then called to the child and upon examination I found his temperature 101°; no other symptoms presented themselves, and thinking that possibly it might be malaria, I gave the child some quinine.

The next day the child was no better, temperature 100° in the morning and 101° in the evening. He complained considerably of pain in his limbs when required to walk, which led me to think of rheumatism. Quinine was continued. Third day: child no better, temperature about the same as the day before, pains in the lower limbs increased especially in the region of the right hip. Not another symptom presented itself that I could perceive and I was at a loss for a diagnosis.

I saw the child at 9 P.M. and nothing further had developed. He slept well during the night, and next morning I saw the child early and lifted him from his bed myself, whereupon he cried loudly with pain in the right hip. I began a careful examination, and upon taking hold of the right foot I found it cold and limp. The diagnosis was clear and I found myself confronted by a disease which I felt that I could not do as much for as I would have liked.

The child could not move a muscle below the hip, and the entire limb was cold. There was retention of the urine, but this yielded to warm hip baths. The pain in the region of the hip gradually disappeared in three or four days. The child was kept at rest in the recumbent position; the hot douche to the spine, with artificial heat to the paralyzed limb constituted the treatment for the first week, after which he was given iron as a tonic with strychnine according to the formula of Prof. Hammond.

℞.—Strych. sulph . . . . . gr. j.
Ferri pyrophos. . . . . ℥ss.
Acidi phos. dil. . . . . ℥ss.
Syr. zingib. . . . . ℥ iijss.
M. S. twenty minims three times daily.

Friction to the paralyzed member, together with electricity was perseveringly employed; but unfortunately, through the advice of a distinguished medical gentleman, the induced current only was applied.

The flexors and extensors of the leg soon regained their power of motion and in about four weeks the patient was able to crawl about the room. The extensor proprius pollicis was the first muscle of the leg to regain partially the power of motion. Other muscles in turn gradually regained some power of motion, and in two months the little fellow began to try to walk.

The muscles of the leg and foot had become markedly atrophied, and to-day the ligaments of the knee and ankle are relaxed permitting hyperextension of the leg and considerable talipes valgus. The temperature of the limb still remains below the normal.

I will not trouble you with lengthy histories of my other cases; suffice it to say, that in

Case 2 the paralysis was noticed in the morning when the child, a boy of two years, was taken from his bed, having been apparently well when put to bed the evening before. The right lower extremity was paralyzed, and marked atrophy of the entire limb remains. The child walks fairly well. No deformity other than the atrophy.

Case 3.—A female, aged 18 months, was taken from the county infirmary by a lady who, thinking the trouble could be easily relieved, brought her to me. Here again the paralysis was of the right lower extremity, but only the flexors of the foot, and extensors of the toes were paralyzed. The onset is not known.

Case 4.—A female, aged 7 months when afflicted. Was brought to me for treatment some months after. The parents stated that the child had been sick, had had fever, and upon the recovery from the fever remained helpless. In this case both upper and lower extremities were paralyzed. Treatment was of no avail, and marked contractures with great deformities developed later on.

Case 5.—A female aged 2 years 6 months. After an attack of fever which lasted several days the parents noticed that their child could not use her right leg. My attention was called to the case, and I found paralysis of both flexor and extensor muscles of the foot and toes. Electricity with iron and strychnine constituted the chief treatment with a not very flattering result. The child is now able to run about but considerable atrophy and talipes varus remain.

The diagnosis ought to be, and doubtless with all of you is easy; but my observation is that many general practitioners are unable to differentiate it from other affections; for during my connection with my first case, a number of physicians saw the case with me and their diagnosis varied from worms and biliousness to rheumatism. I fancy I hear some one say, surely those physicians were very ignorant. Not so, for one of them was, and is to-day a professor in a medical college in good standing. If such men overlook the disease it may be well for us to notice some of the more important diagnostic points. In the first place it might be mistaken for paralysis of a temporary nature; here there will be no softening nor atrophy. There will be no change in electro-muscular contractility, and recovery may be expected in twenty to thirty days. Again it may be mistaken for rachitis, but here again there is no change in the electro-muscular contractility and there co-exists certain changes that cannot fail to determine the nature of the disease. In hemiplegia there will be loss of intelligence and speech, paralysis of one side of the face, strabismus, and generally dilated pupils, electrical contractility normal, absence of fever and muscular atrophy. In myelitis sensibility as well as motility is affected; genito-urinary complications and trophic disturbances such as acute bed sores, œdema of the paralyzed limbs and effusions into the joints are sufficient to differentiate it. Progressive muscular atrophy may usually be known by the age, the slowness of development, and in turn the affection of isolated groups of the muscles. Diphtheritic paralysis may be known by the previous history, by the paralysis of the soft palate, absence of atrophy, and preservation of Faradic reaction.

During the initial stage, before paralysis has occurred the treatment must be purely symptomatic, since a diagnosis is impossible. After paralysis has occurred, and the diagnosis is clear, the most important element in the treatment is rest in a recumbent position. In this I believe all authors agree, but in the further treatment there does not seem to be the harmony of opinion that might be desired. To prevent further destruction of the gray matter, Bartholow recommends quinia and belladonna; hot douche to the spine; the application of galvanism, inverse current, stabile, large volume and low intensity, together with rest. Althaus recommends hypodermatic injections of ergotin repeated once or twice daily. Hammond says ergot is the only medicine capable of cutting short the disease or limiting its lesions. Brown-Séquard praises the belladonna treatment. Loomis, in his third edition speaking of the treatment with ergot and belladonna says he has never obtained any positive results from their use. Simon advises cutaneous revulsives. Loomis says they are contra-indicated. Erb recommends central galvanization as an antiphlogistic remedy for the myelitis and places a large anode over the spine at the supposed seat of the lesion and the cathode over the abdomen. His method is intended as a sedative to the local inflammation. Loomis again says electricity is contra-indicated.

Allen Starr, in an article on "Electricity as a Therapeutic Agent," in the *Medical News*, March 30th, 1889, in speaking of the use of electricity in infantile paralysis says: "There may be an object in reducing congestion; but it is not cer-

tain that this can be accomplished for any length of time by electricity. After the acute stage is over, spontaneous recovery will occur in a greater or less degree in many cases. Is this aided by the application of electricity to the spinal cord? I have yet to be convinced that it is, though I admit that I still employ the agent in deference to the opinion of certain authorities." Further on he says "Experience does not confirm the statements of some text-books, and of those whose interests lie in the direction of its use."

Gowers says, "Electricity has been strongly advocated and largely used in the treatment of infantile paralysis, and there is reason to believe that it is useful, although its influence has been much exaggerated. In no sense is it a curative agent, and there is no evidence that its application to the spine is capable of increasing the degree or accelerating the course of the recovery of the nerve elements. Nor is it easy to obtain evidence of its influence over the muscles. If the wasting is rapid, this progresses in spite of daily and sedulous applications."

My experience with the agent corresponds with Erb, who remarks that "Its results are not precisely brilliant." Since the electro contractility to the Faradic current is abolished, it is useless to apply it, except to those muscles which are imperfectly paralyzed and the interrupted galvanic current should be used until the contractility returns sufficiently to react to the Faradic current when that should be used. But little benefit can be expected if the muscles have entirely lost their contractility. The utility of the Faradic current is a stimulus to muscles imperfectly paralyzed, but liable to degenerate from inaction and to take the place of the galvanic current when the contractility returns.

A valuable aid to electricity is strychnia, especially when given hypodermatically. It should not be thus given more than two or three times a week. In nearly every case tonics are indicated, such as iron, quinine, arsenic and phosphorus, and the formula of Hammond as given in the history of my first case is an excellent one.

DR. KING, of Chicago, had observed three cases in adults during the last winter. In adults it was possible to elicit symptoms that could not be learned from children. Pain is a very prominent feature in adults; not so marked in children. Temporary paralysis of the bladder is always present but it quickly passes off, showing that the fibres to the detrusor muscles are not in the anterior horns but are affected by collateral hyperæmia. Tactile sensation was unaltered. Electricity is keenly felt by children and on this account this agent cannot be thoroughly used in the treatment.

DR. PETER HOOPER, of Philadelphia, said that in his experience electricity was useless. Hypodermic injections of strychnine and massage were best.

A CASE OF DRAINAGE OF PULMONARY CAVITY, WITH A RIB-CUTTER DEVISED FOR THE OPERATION.

Read in the Section of Surgery and Anatomy at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY C. DENISON, M.D.,
OF DENVER, COL.

November 5, 1888, A. C. L., age 26, teacher, single, Cheshire, Conn., and Tilton, N. H.; father died of consumption at the age of 70, and the disease was prevalent on father's side.

The patient had left side pneumonia last April and was five weeks in bed. The attack commenced with a chill and the crisis came in six days. There was rusty sputum and probably some pleurisy complicating the pneumonia. According to the attending physician, Dr. W. C. Williams, of Cheshire, Conn., resolution was slow and the lung did not clear up well. There were no hæmorrhages, but he lost flesh and had night-sweats at times during the summer, and after his arrival in Colorado, which was five weeks ago, felt elevation by increased dyspnœa. Has had chills, afternoon hectic, and now expectorates profusely a yellowish-white sputum, he thinks one-half pint a day. He believes he has improved here, especially in appetite and digestion. Usual weight, 150; on arrival in Colorado, 125; height, 6 feet; spirometrical record now 120 cubic inches; pulse, 108; respiration, 28; temperature, 3 P.M., 100° F.; expansion, 31 and 32½ inches; emaciation considerable; depression is marked, and there is almost no movement on left side. Some air enters the left scapular and interscapular regions, but otherwise dulness predominates on that side. Slight "cracked metal" sound on stethoscopic percussion in the lower and posterior part of the axillary space. On the right side there is some broncho-vesicular breathing in the inframammary region.

Diagnosis: Pneumonic phthisis, third stage left, first (?) right. Gave treatment for night sweats and put the patient on Gardner's syrup hydroiodic acid and syr. hypophosphites comp. N. F.

Reëxamination January 14, 1889. Been in Denver, out on Humboldt street, in the outskirts of the city. Been constantly expectorating mornings; has gained in weight, now 138 lbs.; sleeps well and appetite good, but not so well for the last two weeks; bowels at times loose; coughs during the daytime, and has afternoon chills and hectic; pulse, 110; respiration, 40; temperature, 101⅓°, 2 P.M., and expansion 31 and 32⅓ inches; left lung sinking in size; moist crackles left infrascapular, absence of respiratory murmur left lower axillary space; cavernous breathing apparently superficial left infrascapular, with "cracked metal" sound, showing excavation near the sur-

face. Advised permanent opening and prescribed creosote and use of Cutler's carbolate of iodine inhaler.

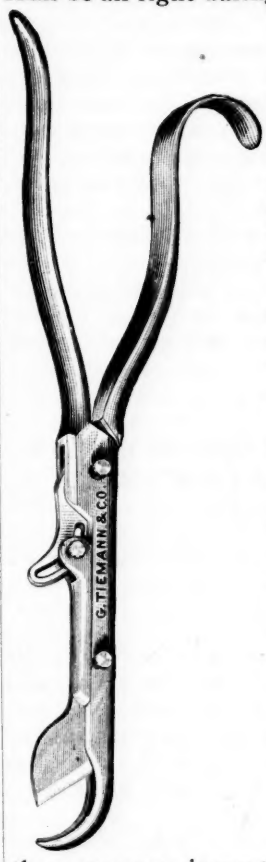
January 22.—Symptoms of progressive softening continue. His people have consented to the proposed operation. Resected the sixth and seventh ribs; entered the cavity, which discharged about four ounces of pus. Introduced a rubber tube, which was 4½ inches long, after trying a shorter one, which was inefficient. Through this tube half an ounce or more of a 5 per cent. solution of salol in liquid vaseline was injected twice a day. In less than two weeks the patient, who had lately ceased to cough and raise, was able to attend to himself, in cleansing the cavity antiseptically and injecting the salol solution, which had been increased to a 10 per cent. solution.

March 16.—Pulse, 92; respiration, 28; temperature, 4 P.M., 98⅔° F.; weight, 138½, which after the operation was only 125 lbs.; spirometrical record, 118 cubic inches; looks much better; expansion, 31½ and 33 inches, almost wholly on right; measurement of left, 15, right, 17 inches; right side much improved. The cavity is apparently the size of half an orange and surrounded with a fibrous deposit. Cut one inch from inner end of the tube. Appetite good; bowels regular; has no fever and sleeps well; does not cough, and expectoration has ceased since the operation; washes out the cavity once a day and injects the salol and vaseline; the discharge continually decreasing, and he has had no back-set.

April 20.—No fever; air evidently enters the lung back of the cavity, as there is a faint respiratory murmur over the posterior and upper part of the left lower lobe and underneath the left scapula. Apparent size of the excavation is 3x1½ inches, reaching from the inner part of the left infraclavicular region downwards and outward toward the left nipple, lying underneath the anterior wall of the chest, though detected through the posterior wall. Discharge about one ounce each twenty-four hours.

Reëxamination, Denver, May 10.—Been in Denver, and doing very well. Is going to Salida, Col., to take a clerkship in a hotel for the summer, and is now to have a new tube inserted. Weight, 140; gain, 15 lbs.; appetite, sleep and digestion in good condition; no discomfort from the tube in left side; injects the 10 per cent. solution of salol once a day; the discharge is mucopurulent and inodorous, between one-half and one ounce in each twenty-four hours; pulse, 76; respiration, 24; temperature, 10 A.M., 98⅓° F. The tube removed was 3½ inches long, and the new one 3⅓ inches, and the distance from the axilla to the inner side of the cavity, measured through the tube, is 4 inches or over. The cavity reaches from the clavicle above, along the side of the sternum downward and outward to the third interspace lying along the front of the chest, an average of 1¼x3½ inches in size. The tube lies in the bottom of the cavity, and the air enters the lung around the same toward the outer part of the left infraclavicular, and the whole of the scapular region and around behind toward the axillary region. Apex beat is within and 1 inch below left nipple. Expansion, 31½ and 33¼ inches; no râles. His looks are in harmony with his great improvement.

May 25.—Writes from Salida that the altitude (over 7,000 feet) does not trouble him, and the discharge has decreased one-fourth. He says: "The cool, clear air makes me feel vigorous and strong, and from present indications I think I shall be all right during the summer."



The Rib Cutter.—In this operation of resection the advantage was apparent of having a bone-forceps which could be operated through a small external opening, and without having to use force to thrust in the blades to grasp the rib.

The contraction of the chest wall made the ribs overlap each other, in which position they were so firmly fixed that they were with difficulty grasped with the ordinary cutters. Besides, I consider it of much importance to separate the periosteum and remove the resected portions of bone before opening into the thoracic cavity.

Determining to have these requisites to success supplied, I devised the accompanying rib-cutter, which was first made by a young mechanic, H. Rauchfuss, of Denver, and afterward perfected like the accompanying cut by Tiemann & Co., New York.

It combines a bone-forceps with a periosteum separator, and by the toggle-joint, which crowds the knife down upon the latter, gives the operator power enough to make a clean square section of the rib without wrenching or injuring the adjacent parts. When one section is made the periosteum separator, turned a little so its edge will bear against the inner surface of the rib, can be crowded along the bone so as to free it from all attachment, and the second section made as desired; or this freeing process may be accomplished before any section whatever of the rib is made.

Then one or more other ribs may be treated in the same way if desired, the external wound (or wounds, if more than one external opening is made to resect several ribs) may be cleaned, and bleeding controlled. The cavity may then be entered at a selected point by thrusting a blunt-pointed instrument through the pleura and the lung periphery, the opening enlarged with the finger and the drainage tube inserted. In the case above cited the two pleural surfaces were supposed to be adherent, or the pulmonary connected with the pleural cavity. The external opening of the tube immediately after its insertion was stopped by absorbent cotton and vaseline, and only oozing allowed when expiration or a cough took place.[1]

The treatment which I commenced on the next day—injections with salol and liquid vaseline—was original so far as I know. Yet I have every reason to believe that my hopes for the method have been realized, as shown in this case, namely, that the antiseptic in this form would be unirritating; that some of it would remain in the pulmonary cavity; that the wound would be kept sweet and the healing promoted.

In another case operated on May 23d a resected portion of a rib 1¼ inches long was removed through an external opening of the same length.

GLAUCOMA FULMINANS, AFTER EXTRACTION OF CATARACT WITH IRIDECTOMY.

Read in the Section of Ophthalmology, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY PETER D. KEYSER, M.D.,

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It is a well known fact that iridectomy is the sovereign remedy for glaucoma, and a few cases have been reported (I have had such cases myself), in which there has been a return of the symptoms necessitating a second iridectomy. But never have I seen or heard of cases like those I purpose detailing in this report.

On July 21, 1888, I operated on the left eye of Mrs. E. G., an English lady æt. 66, for the extraction of senile cataract. She was in good health, but of gouty diathesis—some gouty spasmodic cough at times. The lens was completely clouded. Position and projection perfect. She had never had any severe or acute attacks of gout, although at times she said she was rheumatic. The urine had shown some albumen the year previous, but under the efficient care of her physician, Dr. A. K. Minich, this had passed entirely away.

The operation was made with all antiseptic precautions. The instruments were washed in absolute alcohol; the eyelids and skin around washed with water and soap, then a solution of silico-fluoride of sodium, gr. ¼ ℥s. The latter solution was then instilled freely in the conjunctival sac, after which a 2 per cent. solution of cocaine was dropped in. Everything being ready, the incision of the cornea, upper section, was made, and a large iridectomy. There was no hæmorrhage of any kind from the iris or from the anterior part of the globe which extended into the anterior chamber. After opening the capsule the speculum was removed, and the lens delivered on gentle pressure over the lower lid. No vitreous was lost, and no cortical mass left in the eye. The whole operation passed off beautifully without pain or distress. She counted my fingers very promptly and saw the persons around.

The eye was again well washed with the silico-fluoride of sodium solution, a drop of atropia sulph. gr. ij ℥j instilled therein, to draw the iris away from the incision and prevent any anterior adhesion, and the bandage put on.

On the 22d, after a good night's rest, and twenty-four hours after the operation, the bandage was removed, the external parts of the eye washed with warm water and the eye itself with a solution of boric acid gr. x ℥j. By a candle light the eye was examined and found in good condition. No swelling or pain. The flannel bandage was removed and a Liebreich bandage put on, which was lighter and more comfortable.

On the 23d the eye was again washed the same as the day previous, and found remarkably well; vision was excellent. Permitted to sit up in her rocking-chair all day now. On the 24th still doing so well. On the 25th called to see her as usual and found her in splendid mood and condition, as there had been no pain or discomfort since the operation, and she was looking forward to the pleasure of again seeing. About an hour or two after I left her she was taken suddenly with an attack of very acute pain in the eye, extending up through the left half of the head. She had had no rest during the night, but thinking it would pass away, did not send for me, knowing that I would call the next day. When I called she was still suffering, and on removing the bandage I found the following condition of the eye: Pupil dilated, iris pushed forward towards the cornea, anterior chamber containing a large quantity of blood. Tension of the ball very great, + 3 to full extent. Vision reduced to the merest perception of light. All the appearances and symptoms of glaucoma fulminans. A solution of salicylate of eserine gr. ij ℥j was instilled into the eye, and repeated three times that day. It gave relief and the next day the hyperæmia began to break up.

This treatment was continued for two or three

[1] Since writing the above have devised and been experimenting with a valvular drainage-tube, which will allow the pus to come out but the air to enter. It seems to be a success. C. D., February, 1890.

days in the hope that the blood would be absorbed so that I could make another iridectomy. But as the blood was taken up it was perceived that the iris was pushed directly against the cornea, leaving not the least anterior chamber. I was then obliged to wait, hoping eventually to be able to get room enough to pass a small v. Graefe knife through the cornea without catching the iris, and then remove a large piece of the latter. During these days she would suffer at times with attacks of pain in the head. The tension of the ball kept up. After the absorption of the blood the vision began to improve for a few days, but then dimmed again.

It was not until fourteen days after the first attack, and under the constant instillation of the eserine solution, that I was able to make a good free iridectomy. This was done directly downwards, and at the same time lacerate the posterior capsule. The eye healed after this last operation very nicely, but developed very little vision; only light, especially when from the temporal side, and at times fingers could be seen. Sight seemed to improve for a while, then became less and less until it was almost nothing. I regretted that I could not make the iridectomy sooner, but it was utterly impossible to do so. I feel sure that if such an operation could have been done a few days after the attack, the sight would have been saved, as in the cases mentioned below.

It has been one of the phases of my professional life that, when I have a very interesting and uncommon case, within a year a similar one is sure to come under my observation, so on October 26 of the same year I removed a cataract from the left eye of Mr. James M., an English gentleman æt. 71. Position and projection was perfect. Right eye incipient cataract, but patient able to get around without assistance. Rheumatic, gouty diathesis, although then in excellent health. Urine free from albumen or sugar The operation was made just as the previous one and under the same antiseptic precautions. The capsule was found very tough. The lens came out on pressure, and the vitreous presented itself immediately after, but none came out of the incision.

October 27. All well. Eye washed with boric acid solution. No swelling or pain.

October 29. Eye did well until 1 A.M., when very severe pain set in, extending up into the head. The bandage was removed and applications of warm water made over the eye. When I saw him the pain was not so severe, but pupil was dilated, anterior chamber reduced, with a considerable hæmorrhage therein, and tension +3. Otherwise eye looked well.

The case of Mrs. G. coming immediately to my mind, I determined to make an iridectomy as soon as possible, and as the blood in the anterior chamber was so much less than in her case, I felt I could do it in a day or two after the use of eserine. So on the second day after the instillation of a 2 gr. solution of eserine, finding the hyperæmia gone, I operated. The eye then gave very little trouble; tension reduced to normal and cure took place. After the eye was well the posterior capsule, which had become opaque, was drawn out with the hook.

On January 21, 1889, his vision was with + 9 D. ◯ + 3.5 D. cyl. 165′ $6\frac{I}{I2}$, and + 13 D. ◯ + 3.5 D. cyl. 165′. He read 1.05 —.

Fortunately, in this case the anterior chamber was not so shallow as to prevent an iridectomy at an early day, the performing of which I am sure saved the eye from loss.

Another interesting case, although not reaching the fulminating form of those previously mentioned, but of well-marked symptoms of acute glaucoma, came before me in a hospital patient this year. Mrs. McG., 58 years old, well developed, rather stout and in good health. Right eye cataract—has been coming for the past three years. Position and projection perfect. Left eye, incipient cataract. Right eye extraction; upper iridectomy and lens removed on pressure without any mishap. Eye did remarkably well with excellent vision until the ninth day, when a sharp pain suddenly set in in the eye and head, vision became dimmed. I saw her soon after the attack and found the pupil somewhat dilated and iris pushed forward toward the cornea, with ball very hard. Tension + 3. Eserine solution gr. 4 ℥i was instilled at once, and a 2 gr. solution that evening and next day, when iridectomy was made. The pain was relieved on the instillation of the eserine and tension began to recede, but fearing a return on discontinuing the use of the eserine, the operation was performed.

Fourteen days after the last operation she was discharged with a good eye and vision + 10 D. = $\frac{6}{7^{\frac{6}{8}}}$.

In these three cases atropia gr. 2 ℥j was instilled once only, and then immediately after the operation. I have for a long while made it a rule to use the mydriatic at this time so as to remove the likelihood of the iris falling back into the incision in any way. In looking over the literature in relation to the development of glaucoma after the extraction of cataract with iridectomy, I am surprised to find so little in relation to it.

Bowman appears to be the first to call attention to it, for in the London Ophthalmic Hospital Reports, Vol. v, p. 1, he recites two cases in which there was great increase of tension after extraction of the lens and iridectomy. He says that it appeared to arise from an irritable condition of the nerves of secretion passing over into a paralytic state. Carter is the next to write of the glaucomatous condition which may arise after extraction with iridectomy, and recommends the incision of the posterior capsule.

These two are the only writers that I have seen

so far who mention the occurrence of this condition, and in an experience of twenty-five years with large hospital service, these few cases are the only ones which have come to my notice. I have had many cases of iritis in different forms and at times subsequent to the operation of extraction, but never any developing of the marked glaucomatous symptoms and appearances as here related.

I regret exceedingly my inability to have been able to make the second iridectomy at an early date in the first case described, for I really think that then the vision could have been saved; but when the chance came, it was too late, the eye having suffered already too severely from the glaucomatous process.

The question would naturally arise, What could have been the cause of the sudden attack of glaucoma in such an aggravated form in these cases? Priestly Smith, who has studied the pathology of glaucoma very thoroughly, after consideration of the ideas of all the other writers, claims that an insufficient circumlental space predisposes the eye to glaucoma, and this insufficiency may depend upon: 1, the increasing size of the lens which comes with advancing years (Just here the query would come in, does not the eyeball reach its full growth and the lens its full size by 25 or 30 years of age?); 2, subnormal size of ball or of the ciliary zone, depending possibly on senile contraction—I would remark also here that most cases I have seen have been with full round eyes, and how about cases in young persons and children, that occasionally occur?—3, from the excessive size or prominence of the ciliary processes, which may be present at any time of life.

Among the exciting causes of primary glaucoma is congestion of the uveal tract which involves enlargement of the ciliary processes, which leads to compression of the infiltration angle. This may arise, as suggested by Bowman years ago, in a sudden paralytic action of the nerves of secretion causing an interference in the circulation, creating a morbid process in the ciliary processes throwing out an undue secretion into the vitreous, too rapid to pass from the vitreous into the aqueous chamber. Being thus impeded in the filtration process, a filling of the vitreous chamber takes place and a pressing forward occurs. This is seen by the advancement of the lens and iris toward the cornea accompanying the increase of tension. In the cases above described there was no insufficiency of circumlental space, as the lenses had been removed, but the posterior capsules remained intact attached to the zone of Zain, making a curtain, as it were, in front of the vitreous, which perhaps interfered with the free infiltration between the chambers. The escape of the fluid being retarded, the intraocular pressure naturally rises, the circulation in the ciliary processes becomes obstructed, swelling of the tissue takes place and an unusual condition of vascularity occurs; and in some cases hæmorrhage may emanate from an atheromatous condition.

It must be remembered that a single iridectomy in a glaucomatous eye does not always relieve it from the danger of a recurrence at some future day, and that another iridectomy would be necessary to save the eye.

I feel that more of such attacks of glaucoma after cataract extraction occur than we are aware of; that they have been overlooked, because not expected, and when developing have been classed as iritis.

In all cases of extraction of cataract, where there is a sudden interference in the regular and smooth course of healing, a careful examination of the tension should be made daily, and when any increase is found, instillation of eserine be made, and then, like Carter, I would recommend the rupture of the posterior capsule, preceded or accompanied as the case may be, in many instances by an iridectomy.

ANOTHER TWELVE MONTHS OF PERITONEAL SURGERY—FIFTY-SEVEN CASES.

BY HENRY T. BYFORD, M.D.,

PROFESSOR OF DISEASES OF WOMEN AT THE POST-GRADUATE MEDICAL SCHOOL OF CHICAGO, GYNECOLOGIST TO ST. LUKE'S HOSPITAL, SURGEON TO THE WOMAN'S HOSPITAL OF CHICAGO.

Having, at the annual meeting of the Chicago Gynecological Society, October, 1888, reported my peritoneal sections for the year ending June 30, 1888, I have thought it best to commence this report with July 1, 1888, in continuation with the old one.

MORTALITY.

Perhaps the most interesting subject for us to examine is the mortality, and our first inquiry will be, what kind of cases usually get well, and in what kind do most of the deaths occur? All abdominal sections in which there were no adhesions (sixteen in number) recovered. All vaginal sections (sixteen in number), with and without adhesions, got well, excepting one in which the death depended upon general conditions, viz: delirium tremens and its complications. In the series of forty-eight cases of last year, all abdominal sections without adhesions (sixteen in number) got well, excepting two cases of hæmorrhage due to the employment of the prevalent imperfect methods of tying the pedicle.[1] This accident ought not to have occurred, and has not occurred to me since. As far, therefore, as these 105 cases are determinative, I feel justified in inferring that cases of abdominal section for removal of the uterus or appendages in which there are no ad-

[1] I am including exploratory incisions in which the adhesions were not interfered with.

hesions or development in the broad ligament (the patient being in good condition for operation), ought to recover in all except rare cases of unavoidable accidents. Of the twenty-one cases of vaginal section of last year all recovered, making, with those of the present year, thirty-seven cases with one death, or a mortality of 2.7 per cent. Hence I also infer that vaginal section, in the cases in which it is indicated, is at present safer than abdominal section.

When extensive adhesions, development in the subperitoneal tissue, or pus accumulations occur, we have desperate cases to deal with, and get a high death-rate after our operations. Of the eight deaths in this series five belonged to this class, viz: one malignant and four developed in the broad ligament.

Another cause for a high mortality is the debilitated and often septic condition of the patient at the time of the operation. One patient was so nearly destroyed by a pyosalpinx that the operation was done as a last resort. In one case the abdominal cavity was at the autopsy found healthy, and the death caused by exhaustion and suppuration of hypodermic needle punctures in the thigh. This was also a last resort case. In another case of carcinoma of the cervix the operation (vaginal hysterectomy) was the easiest and most perfect operation I had yet done, but the patient had taken morphine and alcohol to such an extent that she died of their effects. In another case a patient with uterine sarcoma died, three weeks after the operation, of inanition. This case I have not included in the mortality, as no connection between the operation and the death could be found by the pathologist at the autopsy —the wound was healed.

One of the most important things in the development of peritoneal section must be the elimination of the accidental. But for a sponge left in the abdominal cavity in one case, the infection by an assistant in another, and an accidental and unnoticed rupture of the stump sac in another case, the general mortality would be 8.77 per cent., instead of 14 per cent.

Yet the experience derived from these eight fatal cases has been of much more value to me than that derived from the forty-nine recoveries. Indeed, I regard it about as difficult to become a first-class peritoneal surgeon without an extensive experience with fatal cases, as for a rich man to go to heaven.

DIAGNOSIS.

If what I have said should prove to be in accord with the experience of others, then, by means of an accurate diagnosis of the local and general conditions, we can speak thus to our patients: To one, "Your chances of surviving the operation are 98 or 99 in 100; the danger need not deter you from seeking its benefits;" to another, "Your chances are 90 in 100, but your disease will not shorten your life—do not take the risk;" to another, "Your chances are from 80 to 90 in 100, but the remote risk is greater; take your chances now, lest they be worse hereafter."

Accuracy of diagnosis is difficult, but not impossible of attainment, and will perhaps only be attained by those who have opportunities for verifying and correcting the diagnosis by peritoneal section. Its want is one of the most conspicuous imperfections of abdominal and pelvic surgery, yet one of the most valuable attainments.

SUBSEQUENT HISTORY.

The determination of the utility of these operations depends largely upon the remote results. In a few of the cases of oöphorectomy for diseased appendages the cure has been immediate and complete, but in the majority the improvement has been gradual. As months pass by the reports become more and more favorable. It has been an agreeable surprise to note the excellent results in hystero-epilepsy and mental failure. I have altogether removed ovaries for such mental conditions in twelve cases, with immediate or rapid recovery in five cases, gradual improvement in six cases, and a persistence of symptoms in one case. I am in consequence inclined to regard it as an operation of great value not only in cases entirely dependent upon pelvic disease, but in those in which ovulation or menstruation is only an exciting cause. It is often a necessary step to the cure, and makes the cure by other means possible.

SHALL WE EXHAUST ALL OTHER THERAPEUTICAL RESOURCES BEFORE PERFORMING PERITONEAL SECTION FOR DISEASED APPENDAGES?

I would answer, if that means to try all remedies, decidedly no—not any more than I should try version, embryotomy, symphisiotomy, ergot, etc., before resorting to Cæsarean section in a case of labor at term with a conjugate of one inch. After examining and studying my case I would claim the same right of judgment, and not wait until too late to operate in the one case any more than in the other.

CURE OF RETROVERSION.

I have to report the cure of four cases among the eight of retroversion and retroflexion in the vaginal ovariotomies and oöphorectomies. This was accomplished by leaving an iodoform gauze tampon under and in front of the replaced cervix uteri for forty-eight hours after the operation. The exudates and adhesions about the stumps and between the anterior and posterior walls of the recto-uterine pouch often fixes the uterus in the position in which it was tamponed. If the uterus fall back into retroversion when the tampon is removed, it may tear loose a recent adhe-

sion and cause some disturbance, as it did in three cases; but this is of course only temporary.

AFTER-MANAGEMENT.

I seldom give opiates, and consider them often injurious. Yet, after the bowels have moved the main objections to their use have subsided, and indications for them may arise. There are cases in which they are required almost immediately after the operation, to insure quiet. The time when they are contraindicated is, I think, from the end of the first to the end of the fourth twelve hours P. O. By paralyzing peristaltic action they favor adhesions of the intestinal loops in the positions in which they were placed or pushed at the operation, and which may be such positions as will prevent the intestines resuming normal functions.

The most valuable and striking action of salines is when they are administered during the second and third twelve hours for symptoms of intestinal obstruction, viz: tympanitis and regurgitation, without nausea, of all fluid taken, often following a few hours of gastric quiet. In such cases the saline acts by filling the intestinal loop with fluid and favoring normal peristalsis, tearing them loose from their adhesions and forcing the fluid through them.

It has been supposed by many, as well as myself, that twenty-four hours was long enough to leave the forceps on the broad ligaments in vaginal hysterectomy; yet I report a case of almost fatal hæmorrhage following their removal in thirty-six hours (No. 7). With regard to the advantages of forceps, the question is not whether in the concrete case the forceps or ligatures are better or safer, but rather, which can in the given case be best applied. When the uterus can be pulled down, five ligatures can be applied to each broad ligament quite rapidly and safely; when the uterus can not be pulled well down the forceps reach better. The quintuple ligature, when the parts can be pulled down, is safer than the forceps, because the broad ligament is not of equal thickness throughout, and portions of it are liable to receive too little pressure by the forceps and either bleed or slip out.

A number of the charity cases were done before classes ranging from thirty to fifty students, and recovered without a bad symptom.

In one case, Sophie N., three sections were made upon the same patient, a vaginal oöphorectomy, a laparo-hysterorrhaphy, and an inguinal oöphorectomy. The ovary having been drawn forward by the hysterorrhaphy, I at last entered the abdominal cavity by way of the inguinal canal.[2]

In the few abdominal hysterectomies the stump was treated extraperitoneally, and each time with success. In one case (No. 2) I adopted a new method by separating the bladder and anterior vaginal wall from the cervix and fixing the stump extraperitoneally in the vagina.[3] When practicable I should call it, as far as the subsequent condition is concerned, preferable to abdominal fixation. I have since employed it successfully in two other cases, and to my utmost satisfaction[4]

[2] See Transactions of Chicago Medical Society for Dec. 16, 1889.

SUMMARY.

	Whole No.	Recovered.	Died.	Per cent. Recovered.
Ovariotomies—Abdominal.				
Intraperitoneal tumors.	11	10	1	90.9
Subperitoneal tumors	7	3	4	42.8
Ovariotomies—Vaginal.	3	3	. . .	100.
Oöphorectomies—Abdominal.				
For diseased appendages.	15	13	2	86.6
For general conditions.	2	2	. . .	100.
Oöphorectomies—Vaginal.				
For diseased appendages.	5	5	. . .	100.
For general conditions.	1	1	. . .	100.
Hysterectomy—Abdominal.	4	4	. . .	100.
" Vaginal	7	6	1	85.3
Laparo-Hysterorrhaphy	1	1	. . .	100.
Exploratory incision	1	1	. . .	100.
Summary.	57	49	8	86.
Mortality, excluding subperitoneal ovarian tumors, is 8.7 per cent., viz.:	50	46	4	91.3

MEDICAL PROGRESS.

STROPHANTHUS IN INFANTILE DISEASES.—M. MONCORVO has treated infantile diseases with strophanthus, and comes to the following conclusions: As a diuretic and for combating cardiac disturbance strophanthus is invaluable in infantile therapeutics. Its action is prompt and energetic. It is perfectly innocuous. The tincture in mitral or aortic lesions with hyposystole and oliguria restores cardiac tone, regulates the rhythm, and strengthens the pulse. In infantile pneumonia or broncho-pulmonary affections, accompanied by cardiac weakness, strophanthus is a valuable heart tonic. M. Moncorvo has not observed any marked influence on the nervous system or temperature. The action of strophanthus persists long after the treatment has been discontinued. M. Moncorvo employed an alcoholic tincture, in doses varying from 4 to 28 drops in twenty-four hours.

GONORRHŒAL INFLAMMATION OF THE EYE.—Kemény (*Centr. Bl. für Bak. und Parasitenkunde*) reports a case of accidental autoinfection of the right eye with gonorrhœal virus in the person of a soldier, who was suffering at the time from acute gonorrhœa. Actual proof of the character of the conjunctival inflammation was furnished by the discovery of gonococci in the secretion. The gonococci were found, as in urethral gonorrhœa, in the protoplasm of the pus corpuscles.

[3] See Transactions of American Gynecological Society for 1889.
[4] See Transactions of Chicago Medical Society for Dec. 16, 1889.

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THE NAVAL MEDICAL CORPS.

The approaching close of the medical college terms renders pertinent and timely the suggestion of one desirable field of professional occupation open to the young graduate who has been well educated, to wit: the medical corps of the United States Navy, in which there are now *eleven*, and will be during the year, independent of possible casualties, *thirteen vacancies*. From the very creation of this department of the naval service by Act of Congress, approved March 27, 1794, contemporary with the establishment of a naval force, this corps has maintained its high professional standing by the exclusion of unqualified candidates, and by a subsequent examination of the assistant surgeon, formerly five, but now only three years after his admission, before he is recommended for promotion to the grade of surgeon, which examination successfully passed, his future depends upon his own conduct as an officer and a gentleman.

For many years the applicants for admission into this corps far exceeded the vacancies, and they comprised the best element among the young graduates. The Board met annually in the spring, after the college commencements, and successful candidates awaited the occurrence of vacancies, the entire number rarely succeeding in obtaining commissions, those not doing so consequently having to renew their examination the following year. Recently this has not been the case, the number of applicants not having been sufficient to meet the demand.

The position of the medical officer in the navy is an attractive one. When on sea service he has the opportunities for travel in foreign countries, where his official position admits him to the highest social circles, while his duty on shore is always at the large sea-ports, at which the navy yards, naval hospitals and naval establishments are located, and where facilities for study as a diversion exist which do not come to his young confrère in the army.

The reputed severity of the Naval Board examination has doubtless deterred many well-qualified young men from presenting themselves; but those who have passed declare that they were asked nothing which a well prepared graduate in medicine should not know, while inspection of the written work of rejected candidates, which is filed at the office of the Surgeon-General of the Navy, and is accessible to those candidates and their friends, satisfies the inquirer that no other decision was possible.

The routine procedure for admission into the medical corps of the navy is practically the same as that for the army. Permission is granted by the Secretary of the Navy, after formal application, to young men between 21 and 26 years of age, of sound physical condition and properly attested moral character, to present themselves for examination by the Naval Medical Board, composed of medical officers of the higher grade. After the preliminary examination the candidate prepares an autobiographical sketch, detailing his opportunities for acquiring an education, and afterwards an essay on some assigned professional topic and written answers to a series of comprehensive questions in the various departments of medicine. An oral examination follows by the several members of the Board, in the presence of all, upon each branch of medicine and upon such collateral studies as the candidate may have pursued, with the object of ascertaining, not so much the amount of information he may have acquired by rote, as the extent of his understanding of the fundamental facts and principles which constitute the science of medicine. Finally extemporaneous chemical and pharmaceutical exercises, the clinical diagnosis and treatment of actual patients in hospital, the adjustment of surgical apparatus and appliances, and the performance of operations

upon the cadaver exhibit, his acquaintance with the practical requirements of the healing art, and his fitness to assume its responsibilities under the emergencies which sometimes place the issue of life or death upon his unaided knowledge and skill. Manifestly such a course of examination, written, oral and practical, satisfactorily determines whether the candidate has received a good education in medicine, and is only such as should be required of every aspirant for a doctor's degree. The subsequent second examination preliminary to promotion to the grade of surgeon, *three* years after admission, presupposes a wider practical acquaintance with the various branches of medicine and a familiarity with its current literature.

The interest of the Bureau of Medicine and Surgery in the young naval medical officer does not end with his examination. Opportunities for self improvement are liberally provided, and individual research and investigation are encouraged by the supply of apparatus, instruments or other facilities required, and by the publication of essays voluntarily contributed, as well as by the requirement of annual statistical, medical and sanitary reports from every officer in charge of the medical department of a vessel or station.

The medical officer of the navy, at the very outset of his career, is made to understand that his first duty as a physician is to protect the community in which he is established from the ravages of disease, and herein the medical corps of the navy usually exemplifies the real mission of the medical man in civil as in military life--to place those who are under his care in the best possible sanitary condition; to zealously guard against the operation of preventable causes of disease; to antagonize the morbific agencies that elude his vigilance, and thus to reduce to a minimum the necessity for therapeutic measures; and, finally, to use natural agencies for purposes of cure whenever these can replace pharmaceutic administration. The sanitary supervision of a community like the navy is much simplified by the preliminary physical examination of every officer and enlisted man—adults and adolescents—who enter it, and by their compulsory subjection to regulated habits in food, drink, personal cleanliness, etc. The immature and the very old, the weak and decrepit, women, with their special train of ailments, and those predisposed to disease—classes which in civil life outnumber all the rest—are excluded from enlistment, so that the duties of the medical officer are free from many of the disagreeable and painful attendants of the practice of medicine on shore. Except for the incidents of war, epidemic visitations, or the vicissitudes of the sea, his work on well-disciplined and well-appointed vessels and at naval stations will be chiefly that of sanitary supervision.

The pay of the assistant surgeon while on leave or waiting order is $1,000 a year, on shore duty $1,400, and at sea $1,700, with a ration in money of thirty cents a day, making his initial sea-pay $150.75 a month. After passing his second examination, three years after his original appointment, he is entitled Passed Assistant Surgeon and receives $1,500 on leave or waiting order, $1,800 on shore duty, and $2,109 at sea, with an increase of $200 in each of these if not promoted to surgeon within five years. After attaining the grade of surgeon his pay is progressively increased every five years until twenty years after date of commission, when it remains stationary. The pay of the medical officer of the navy after reaching the grade of surgeon, therefore, ranges from $2,000 to $3,000 while off duty, $2,400 to $4,000 while on shore duty, which is usually accompanied with commodious public quarters, and $2,909 to $4,509 while on sea duty. The Surgeon-General holds the rank and receives the pay of Commodore, to wit: $5,000. The pay of the medical officer continues without intermission from his entrance into the service until the time for his retirement after forty years' service or on attaining the age of 62 years, after which, until his death, he receives three-fourths of the highest sea-pay of his grade, although he is not called upon for any duty. Should he die from causes originating in the line of his duty, his widow and minor children receive the pension provided by law for his rank.

The numbers and grades of the naval medical corps as now established are as follows: Fifteen *Medical Directors* having the relative rank of Captain in the navy (Colonel); fifteen *Medical Inspectors* ranking with Commander (Lieutenant-Colonel); fifty *Surgeons* ranking, according to seniority, with Lieutenant-Commander (Major) or Lieutenant in the navy (Captain in the army), and ninety *Passed Assistant* and *Assistant Surgeons* of the rank of Lieutenant or Ensign (First and Second Lieutenants in the army). The in-

crease in the number of ships will soon necessitate a reorganization of the *personnel* of the navy, and it is, therefore, probable that the medical corps, with the other branches, will receive a large accession of numbers and increase of pay.

SIMPLICITY THE SEAL OF TRUTH.

DR. ROBERT KOCH, in the minds of many the foremost scientist and physician of living Germans, is in manner of life the personification of simplicity. His demeanor is said to be so plain and free from self-assertion that, by comparison with him, certain others of his *confrères* of the Berlin profession appear haughty and unapproachable. As an illustration of Dr. Koch's habits, it is said that when he travels he is quite as apt to be found taking a third-class railway ticket as any other, while the majority of his students would consider their dignity compromised by anything less than a second-class passage. In other matters as well are indicated attributes of mind and character which place him in the right line of descent from the great BOERHAAVE, whose favorite motto was "*Simplex sigillum veri.*" And this is the legend that is graven on his monument in the St. Peter's church at Leyden, by her grateful citizens, a fact which has put in the mouths of thousands the admirable sentiment, "Simplicity is the seal of truth," hundreds of whom have probably dwelt but lightly on their debt to the great professional talents of him whose life was squared to that rule. Simplicity is the trait of the master, while the lack of it seems entirely natural to the novice. As it is the single flower that produces the seed, while the double one beside it perishes with its beauty, so there is that singleness of purpose and simplicity of method that bear the fruit of life-saving discoveries, such as the genius of Boerhaave gave to his generation and such as Koch's labors promise to yield in surpassing measure.

PERMANENT DUTIES FOR THE ANNUAL MEETINGS.

An amendment offered by Dr. GIHON which proposes to change the first day of each annual meeting from Tuesday to Wednesday will come up in its order at Nashville.

While this subject is under discussion it would seem desirable also to consider the propriety of making the dates of the annual meetings permanent.

In the present number of the JOURNAL we publish a list of thirty-eight State Medical Societies, the names and addresses of the secretaries, and also the places and dates of their annual meetings for the current year.

These societies are all of them closely affiliated with the Association, and none desire that their State meetings shall conflict with those of the Association. It so happened last year that the Illinois State Medical Society had previously named May 20, 1890, as its next date of meeting. Later, and as a matter of convenience to those who were to entertain the Association, its next annual meeting was set for the same day. As a result the officers of the Illinois State Medical Society were obliged to issue notices to all their members and to change the time of their State meeting from May 20th to May 26th, as announced in the JOURNAL of March 1. Referring to the table it will also be found that the annual meetings of the State Societies of Michigan and Missouri are to be held on the same day. It is desirable, if possible, that in these States such arrangements may still be made as to conserve our common interests.

When we remember that thirty-eight States are each year to determine the dates of their meetings, it is obvious that unless all are advised as to a fixed time when the Association shall hold its meetings, such conflicting appointments will constantly occur.

It seems necessary therefore, that as in times past we fix upon a definite day in May for the meetings in the South and upon the corresponding day in June for those in the northern sections of the country, and that these dates be made perpetual.

EDITORIAL NOTES.

HOME.

EXPLANATORY NOTE.—The address of Dr. Jacobson, entitled "Homœopathy and Medical Progress during the Present Century," to which reference was made in an editorial last week as appearing in that number, will be found in the present issue of THE JOURNAL.

NEW YORK COUNTY MEDICAL ASSOCIATION.—Dr. George Tucker Harrison, the Vice-President of the Association, has been elected to the Presi-

dency, made vacant by the decease of Dr. C. S. Wood. Dr. S. B. W. McLeod has been elected to the Vice-Presidency.

BEQUESTS TO NEW YORK CHARITIES.—Under the will of the late John Jacob Astor, St. Luke's Hospital will receive $100,000, and the new Cancer Hospital an equal amount.

AN EMERGENCY HOSPITAL has been provided at Denver, Col., by the members of a voluntary society, known as the Associated Charities. For the time being, the hospital will be located at a house which has been rented for its use.

PRIZE ESSAY.—The Medical Society of the State of New York offers a prize of one hundred dollars, payable from the Merritt H. Cash prize fund, for the best original essay on any medical or surgical subject. The conditions are: That the competitors shall reside in the State of New York; that the essays shall be either printed or type-written; that each essay shall be designated by a motto on the title page; that a corresponding motto, together with the name of the writer, shall be enclcosd in a sealed envelope and attached to the essay; and that all esays shall be sent to the chairman of the Committee on Prize Essays, Dr. George F. Shrady, New York, prior to January 1, 1891.—F. C. Curtis, Secretary. Dr. Daniel Leroy, of New York, and Dr. Eugene Beach, of Gloversville, are other members of the Committee.

CHICAGO POLYCLINIC.—A special course of nine or more lectures on "Abdominal and Pelvic Surgery," with demonstrations on dogs and cadavers, will be given at the Chicago Polyclinic by Profs. N. Senn, C. T. Parkes, Chris. Fenger and W. T. Belfield, beginning March 24.

NEW YORK DISPENSARY.—The New York Dispensary, which is the oldest institution of the kind in the city, and probably in the country, has just issued its centennial report. It was founded in 1790, and is not only the oldest, but the largest dispensary in New York. In presenting this report of its increasing work for a hundred years, the Board of Trustees call special attention to the territory in which its ministrations are carried on, which includes within its borders the poorest part of the city, where the assistance which such an institution can give is most constantly in demand; and also state that, notwithstanding the size of this territory (larger than that of any other dispensary in the city) and the number of its regular patients, medical and surgical aid is also given to the deserving poor of other parts of the city. In the hundred years of its existence, the medical staff has treated an aggregate of 2,142,999 patients, and at the present time as many as 500 cases are treated in a single day. During the year just closed there were 44,331 new cases; a larger number than in any preceding year.

FOREIGN.

SICKLY CHILDREN AT TWO DOLLARS.—When Stanley's expedition reached Usambiro, the station of Missionary Mackay, on the south shore of the Victoria Nyanza, the sick-list was so heavy that a halt for rest was imperative. Mr. Mackay soon found that the feeble and sick children were being bought up by the natives, for two goats apiece; so that he was led to purchase about twenty-five weak children, "On Mission account," to save them from slavery. To use his own words: "The amount I have paid is two dollars per head."

DR. MACKENZIE'S SUCCESSES IN THE COURTS.—Sir Morrell Mackenzie has won another libel suit, as we are informed by cablegram, the *St. James' Gazette* having been mulcted to the extent of $7,500, or just ten times the sum that the *London Times* had to contribute to his solacing, as the result of a similar suit. Dr. Mackenzie has been fortunate both at Court and in the courts.

PENNSYLVANIA HOSPITAL APPOINTMENT.—Dr. Morris Lewls has been appointed to succeed the late Dr. James H. Hutchinson as member of the medical staff of the Pennsylvania Hospital.

A VENERABLE VIRGINIA PHYSICIAN.—Dr. Thomas T. Slaughter, of Madison County, Virginia, was a graduate from the University of Pennsylvania in 1820, and who has continued in practice sixty-four years, retiring only about a year ago. He is now in his eighty-sixth year and the senior graduate of his school in the Old Dominion State.

CHOLERA IN ASIA.—The Russian Government has sent Dr. Avedik Babajew, who is the head of the Sanitary Department at Tiflis, to Persia, to report on the cholera in that country. A case of cholera is said to have occurred at Bologna. On investigation it was found to be one of sporadic, and not Asiatic, cholera.

TOPICS OF THE WEEK.

AMERICAN PHYSIOLOGICAL SOCIETY.

With the wish to encourage physiological research, a member of the American Physiological Society has offered two hundred and fifty dollars for the best research or researches bearing on the subject stated below, viz.:

"The regeneration of severed spinal nerves in mammals, including man, with special reference, 1, to the reunion and return of function in such severed nerves, without degeneration of the distal portion; 2, to the possibility of union with return of function between the central portion of any one spinal nerve and the distal portion of any other (*e. g.*, the central portion of the ulnar with the distal portion of the median)."

Conclusions to be supported, so far as possible, by histological as well as physiological evidence.

The competition is limited to residents of North America, and the prize to be awarded for original work done after January 1, 1890.

The award will be made by those persons who on October 1, 1891, constitute the Council of the American Physiological Society.

In making its award, the Council will take into consideration researches of which printed or legibly written accounts, marked on the outside "Nerve Physiology Prize," have been received by the then Secretary of the Society before October 1, 1891.

Previous publication will not debar a research from the competition, provided the work has been done after January 1, 1890.

The Council reserves the following rights: To withhold the prize if, in its opinion, no research presented is sufficiently worthy; to award only a part of the prize if, in its belief, a research, though meritorious, does not deserve the whole; to divide the prize between two or more candidates in ratios which seem to it just; and if it think it desirable, to require a competitor to demonstrate his experiments and histological preparations to a committee appointed by the Council.

For the present, communications concerning prize should be addressed to H. NEWELL MARTIN, Sec'y,

Johns Hopkins University, Baltimore, Md., February 10, 1890.

STRANGE VARIATIONS.

The fact is, we are passing through a period of strange variations in climate and temperature. Under the influence of unknown forces the adjustment of normal heat and cold seems disturbed, and the usual order of things appears reversed. Winter has certainly gone astray. There has been unusual moisture, unusual heat, unusual everything; and the present season is a practical illustration of the French saying, that nothing save the unexpected is perfectly sure to happen, and "weatherologists" are aghast. Winter is warm and summer is cold, the wind blows great guns, and the times are sadly out of joint. The year that has gone will long be remembered as the warmest and the wettest since the establishment of the Signal Service in 1871. Whether the general conclusion is warranted that the climate of the north temperate zone is gradually changing may be a matter of doubt. But certainly the climatic phenomena have been of a unique and peculiar character. And if these general atmospheric conditions are continued through the present winter, it will be sufficient to place them among the most remarkable freaks of weather that have ever been recorded.

It is about two years now since the remarkable rainfall began to be apparent. The average annual rainfall from January, 1871, to December, 1877, was about 44 inches; in 1888 it was 52.95 inches, and in 1889 it was about 59 inches. Including these two years, the average for the last nineteen has been nearly 46 inches. The average temperature for the year 1889 was much higher than that of most preceding years, the excess of heat amounting altogether to several hundred degrees. Last year there was a deficiency of heat almost as great. Several times during the year of 1889 the rainfall was so heavy as to cause disastrous floods. The worst of these, of course, was the memorable flood of Johnstown. The great storm of September 9, 10 and 11 will never be forgotten. For three days a terrific gale prevailed, the Sandy Hook peninsula was turned into an island, and hundreds of houses were surrounded by water, and their inmates cut off for several days from all communication with the outside world. Taking these things into consideration, it seems to be evident that some cause out of the ordinary run has been at work during these two years, and surely nothing could be more propitious for the rapid spread of influenza than the remarkable changes that the weather is at present undergoing.—*Medical Classics.*

THE PSYCHOLOGY OF EPIDEMICS.

Every epidemic carries in its train curious exaggerations of many well-recognized characteristics, and these frequently call for appreciation and for treatment almost as much as the disease in which they originate. Perhaps one of the most striking of these mental perversities is to be found in the idea that the epidemic is to be treated by "common sense," or by nostra which have been largely advertised, or by specifics which are known to the laity mainly through their frequent mention in the daily press. Those suffering under this delusion feel that it is wholly unnecessary to seek skilled assistance, and they boldly dose themselves with remedies of whose power and properties they are absolutely ignorant. In Vienna it has already been found necessary to forbid the sale of antipyrin except under doctors' prescriptions, as no less than seventeen deaths were attributed to stoppage of the heart's action owing to overdoses. The freedom with which the prescription of this remedy has been assumed by the public has long since been viewed with anxiety by the medical profession, and frequent warnings have already fallen upon deaf ears; and yet it is to be feared that if the epidemic of influenza should spread, many more examples of recklessness will have to be recorded. Mr. Labouchere, claiming to act "by the light of common sense," upon having "a cough, a headache, and an all-overish ache," accompanied by sneezing, diagnosed

the prevailing epidemic and at once administered to himself "thirty grains of quinine," and to meet the cough he took "unlimited squill pills." He writes that the one "settled the fever" and the other "settled the cough," and that in four days he was quite well. Upon this last fact he is certainly to be congratulated, though we trust that others may not be impelled, "by the light of common sense," to follow him in such heroic measures, or to emulate his example by trying the effect of antipyrin in similar unlimited doses. It is serious enough to cope with an epidemic and its sequelæ, without having matters complicated by ignorant and reckless experimental therapeutics.—*The Lancet.*

DANGER OF FLUSHING THE PERITONEUM WITH SUBLIMATE.

Of all the recent innovations in abdominal surgery, flushing or irrigation of the peritoneum is undoubtedly the most popular in the best sense of the word. Operations for the removal of diseased uterine appendages, electrolysis for fibroids, and complicated manœuvres in the region of the gall bladder, duodenum, stomach, or kidney are seldom taken in hand except by experts. Every surgeon, hower, may be called upon to open the peritoneal cavity, and one of the best safe-guards against the dangers of intraperitoneal operations is flushing of the peritoneum, judiciously performed. The success of this practice has urged many surgeons to seek yet higher success by various modifications.

Mr. Lawson Tait uses fresh water, and others can claim high success where the peritoneum is flushed by the same unsophisticated fluid. But the antiseptic school of operators have largely adopted this practice. Of necessity, they had to take a great physiological problem into consideration: How much of the antiseptic must be mixed with the water poured into the peritoneum so as to ensure asepsis without poisoning the patient?

The merits of the antiseptic and the opposite school are not the purpose in the present argument. Surgeons of the former school believe than an antiseptic agent should be mixed with the water; so they are right to estimate the virtues and dangers of that agent. Dr. Gellé has shown (*Annali di Ostetricia e Ginecologia*, Florence, 1889) that sublimate is a perilous compound for flushing. He describes three cases of ovariotomy where a 1 in 10,000 solution of perchloride of mercury was employed. In the first case, violent abdominal pain and vomiting took place during the night after operation. On the morning a scarlatiniform rash appeared on the face, trunk and arms. No rise of temperature or salivation occurred. By the third day all bad symptoms disappeared. The second patient died from exhaustion through diarrhœa, fifty-two hours after the operation, where the walls of a dermoid cyst were sewn to the edges of the abdominal wound. Interstitial nephritis was discovered. In the third case parovarian cysts were removed. Obstinate vomiting lasted for two days. How far the sublimate was to blame, especially in the second case, which was incomplete, it would be hard to determine. Dr. Delbet's important researches must not be overlooked. He has shown that a large amount of the water first poured into the peritoneum is actually absorbed, especially if it contain a little table salt. In fact, the process is a true transfusion, more likely to act as such on the circulation than Dr. Münchmeyer's practice of injecting water into the subcutaneous cellular tissue, as a substitute for transfusion of blood in hæmorrhage after labor. Transfusion, however, is not what is wanted in flushing the peritoneum. What is especially to the point is another fact discussed by Delbet. After a certain amount of water has been poured into the peritoneum, no more can be absorbed; then strong antiseptic solutions can be added without fear of absorption, provided that they be displaced by a final injection of pure water. This process might have prevented the serious results in Gellé's cases. Unfortunately, though a very pretty physiological experiment, Dr. Delbet's method is complicated. The second flushing with an antiseptic solution, followed by a third with pure water, is hardly in accord with the principles of the strict antiseptic school, for, according to them, the third would undo all the good done by the second. Carbolic acid is almost as likely to irritate as sublimate, if injected in a sufficient amount to counteract sepsis. No wonder, therefore, that the majority of antiseptic surgeons prefer, we believe; sterilization of the water by prolonged boiling.

Flushing of the peritoneum has, in short, been widely adopted in abdominal surgery, with excellent results. Like all other surgical proceedings, it requires to be done carefully. It certainly displaces clots and noxious solid or fluid materials. It also checks, if it does not actually stop, hæmorrhage. It counteracts the shock due to the chilling of the viscera, whatever M. Pollaillon's experience may show to the contrary. Lastly, the transfusion of water into the blood, though not aimed at by the surgeon, is no doubt beneficial. Judging from the experience of "non-antiseptic" surgeons, pure water answers all purposes with safety. The question was the subject of instructive correspondence in the *Journal* last autumn. If, however, it should some day be shown that some antiseptic should be added, that agent will not be sublimate.—*British Med. Journal.*

THE HENRY W. GRADY, ATLANTA, GA., GENERAL HOSPITAL.

The genial, brave, and philanthropic editor of the *Atlanta Constitution*, "being dead, yet speaketh." As a monument to his greatness and goodness of heart, the authorities of Atlanta have appropriated $30,000 to erect a city hospital to bear his name, and the generous impulses of the citizens have led them to contribute $15,000 more. It does not seem to be doubted that at least $100,000 will be raised to establish this monument to Mr. Grady, which will, at the same time, prove a blessing to the people of Atlanta. This will be one of the very few general city hospitals in the South. Why cannot the push of Richmond merchants secure a like provision for the sick of Richmond who may need it?—*Virginia Medical Monthly.*

PRACTICAL NOTES.

CONCERNING THE EFFECT OF VENTILATION ON THE MICROÖRGANISMS SUSPENDED IN THE AIR.

Dr. Richard Stern (*Zeitschrift f. Hygiene*, Bd. 7, Heft 1) made his experiments in a room in which he could have perfectly quiet air, or a more or less complete ventilation. The openings in the walls of the rooms were so arranged that he could admit the air from without, either at the upper part near the ceiling and convey it off near the floor on the opposite side of the room (winter ventilation), or the air could be admitted near the floor and conducted out on the opposite side of the room near the ceiling (summer ventilation). The rapidity of the ventilation was also under complete control.

The air of the room was intentionally loaded with microörganisms. Pure cultures were mixed with the dust collected from school-rooms and factories. This was then dried and pulverized and blown about in the room. The air was then examined for the number of microörganisms, by Petri's method, at various times.

The conclusions arrived at are:

1. That the microörganisms rapidly sink to the floor in quiet air. The finer the dust upon which the micro-örganisms rest the slower the gravitation.

2. The usual ventilation, effecting a renewal of air from one to three times an hour, has no effect upon the removal of microörganisms with summer ventilation, and only to a very limited extent with winter ventilation.

3. Ventilation, effecting a more rapid renewal of air (six or seven times to the hour), does affect the removal of microörganisms, but is scarcely to be attained without a sensible draught.

4. A rapid and complete removal of the microörganisms from the air is only attainable with a strong draught.

5. Microörganisms are not blown off from the floor, walls, furniture, clothing, etc., even with the stronger draughts.

6. The evolution of steam in a room is not capable of rapidly and completely precipitating the microörganisms, although it hastens this process to a not very appreciable extent.—*Medical News.*

ANTIFEBRIN AS A HYPNOTIC FOR CHILDREN.

Amongst the many hypnotics which at present are being so liberally supplied by the chemists to the medical profession, it is well not to lose sight of the value of antifebrin in certain groups of cases. Although the drug suggests more than its action is to hinder the development of febrile condition, or, when that condition exists, to lower the temperature, still in many cases in my practice it has proved a valuable hypnotic and analgesic.

Its value has been most evident in cases of broncho-pneumonia, croupous pneumonia, and bronchitis, and that more especially in cases where children have been the sufferers. The marked relief which has frequently followed its administration has in many cases been extremely gratifying. Cases of fretful insomnia of the young, possibly partially caused by pain, fever, or general *malaise*, have been speedily relieved by the drug, and from six to eight hours of refreshing sleep have been induced. After sleep the awakening was natural, there being no excitement or confusion of thought. There was no period of excitement observed before the drug took effect. Along with the onset of sleep there was a fall of temperature, frequently a copious perspiration, at the same time the respiratory acts were slowed and the pulse-rate diminished. In no case have any evil effects been noticed, although the success of the drug induced its employment in a large number of cases.

The need of a safe hypnotic for children, such as antifebrin seems to be, will, I think, be readily appreciated, the number of cases where it is required being unfortunately very large. It is still further enhanced as a serviceable drug for children by the fact that it is comparatively tasteless, and also by the smallness of its dose; the dose being from two to five grains, depending of course on the age of the child. A useful way of prescribing it, I have found, is to place the powder on the dorsum of the tongue either alone or mixed with a little powdered sugar. It might also be given in the form of a mixture—the drug being insoluble in a watery menstruum—suspended by the aid of mucilage and sweetened by any of the various flavoring syrups. There is yet another important advantage in hospital and general practice over many recently introduced hypnotics, in the comparative cheapness of the drug.—John Gordon, M.D.—*British Med. Jour.*

IS PHENACETIN A REMEDY IN WHOOPING-COUGH?

Dr. R. Heimann, of Landau, answers the above question affirmatively, having used the drug experimentally in a case in which antipyrin entirely failed. The success was so surprising that he administered the drug in two other cases. It reduced the number of paroxysms, which had been from ten to fifteen per diem, to three, and on some days they entirely ceased, only reappearing at night when no phenacetin was given. Dr. Heimann gave a boy of three years six grains in four doses of one grain and a half, a girl of two years five grains in three doses, and an infant of seven months three grains in four doses, without observing the slightest ill effects. One grain and a half of phenacetin would, on the average retain its effect for three hours.—*The Lancet.*

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Amminol as a Sewage Disinfectant—Meeting of the Pathological Society—Signs of Osteo-Arthritis, Periostitis and Senile Atrophy on Bones and Skulls of the Ancients—Chloroform Superior to Ether as an Anæsthetic—New German-English Medical Dictionary.

When the late Commission on Metropolitan Sewage finished its exhaustive inquiry in 1884, the commissioners recorded their deliberate conclusion that "no known process of precipitation purifies sufficiently;" but since then the Amines process has been perfected by Mr. Wollheim, of London, and in the opinion of many competent experts like Dr. Klein, who have examined the results obtained at Wimbledon, the problem has at length been successfully solved. The process derives its name from the fact that for the purification and sterilization of the sewage matter it utilizes certain organic bases belonging to the chemical group of the amines, or ammonia compounds, and whilst chemically efficient, it is said to be so economical that under ordinary favorable conditions it almost pays for itself. The amines, either pure or in the form of amine salts, are used in combination with lime, preferably milk of lime, the proportions varying in accordance with the nature of the sewage and attending conditions. At Wimbledon herring brine is being used, and is introduced into freshly made milk of lime. It is immediately decomposed and a very soluble gaseous reagent is evolved, to which the inventor has given the name of "amminol." This reagent announces its presence by a peculiar briny odor, similar to that of the sea-breeze. Amminol is described as a very powerful disinfectant, and when introduced into sewage it rapidly extirpates all microörganisms capable of causing putrefaction or disease. The disinfectant mixture is added to the sewage as it issues from the sewers, and is thoroughly intermixed with it by mechanical means. The effect is said to be almost instantaneous. By the action of the lime violent flocculation is set up and the suspended matters tend to subside. Simultaneously the putrid smell of the sewage is replaced by the peculiar briny odor of the reagent. In this state the sewage flows into settling tanks, where the subsidence of the solids takes place at a rapid rate. When it is complete (in a depth of 6 feet it is stated to take only half an hour) the clear supernatant effluent, completely deodorized and disinfected, may be discharged with perfect safety. In proof of the efficacy of the purifier it is stated that a sample of sewage which was examined by Dr. Klein contained 2,400,000 organisms in the cubic centimetre, and after treatment by the amines process was found to be perfectly free from organisms. The average cost is stated at from one-half penny to three farthings per 1,000 gallons of sewage, which would be equivalent for London, at an average of 130,000,000 gallons daily, to £125,000 per annum, or something less than a penny rate in the pound. This is little more than one-half the necessary expenditure estimated by Lord Brumwell's committee, and it takes no account of the possible revenue from utilizing the sludge in the form of solid cake or powder for manurial purposes.

At the recent meeting of the Pathological Society of London Mr. Eve showed some specimens of ancient Egyptian bones having signs of osteo-arthritis and periostitis, and some skulls showing senile atrophy. The bones dated from the time of the Ptolemaic dynasty, 1,300 B. C. Among many other interesting specimens two femora were particularly noticed, which showed a periosteal deposit like a frosting of the bone; there was some tipping of the extremities, showing the presence of osteo-arthritis. It was pointed out that the period at which these patients lived was one of high civilization, and the diet was mostly starchy, but nothing is known as to their beverages. A skull was marked with a remarkable symmetrical atrophy occupying a point near the parietal eminences. The outer table and diploe had entirely disappeared and only a thin lamina remained, dotted over with small apertures of blood-vessels. The specimen came from an old person, the bones being lighter than they should be, the jaw was edentulous, and the squittal suture was obliterated. Mr. Eve looked upon it as a case of osteo-arthritic periostitis having no connection with acute articular rheumatism. He thought the decided evidence of change round the vessels excluded the theory of congenital origin.

It is now nearly a year since the memorable cold and gusty afternoon when the reformers among the members of the Royal College of Surgeons found the gates of the institution in Lincoln's Inn Fields closed against them, and were compelled to seek another shelter for their meeting. Their object was to obtain for all members their ancient right to take part in the management of the college—a right which through carelessness had been allowed to lapse into the exclusive hands of the council. For years the grievance has been rankling, but all attempts to remedy it have hitherto failed. The reformers have now prepared a bill for this session of Parliament, by which the interrupted custom would again become part of the college's constitution. A deputation headed by Dr. Dunford Thomas, who throughout the agitation has taken a leading part on the democratic side, waited upon Lord Dunraven and asked him to take charge of this measure in the House of Lords. His lordship

promised to give the request full consideration, and the reformers are now pretty confident that Parliament will at last have the opportunity of settling a dispute which has lasted so long.

At the London Hospital there has been an interesting case of sarcoma of the foot in a patient aged 16 years. Twelve weeks before admission a slight swelling had been noticed above the third toe of the left foot. It was first observed after running, but no kind of injury had been sustained. When the patient came under observation the front of the foot was occupied by a large globular swelling, apparently situated both above and below the metatarsal bones. The swelling on the dorsum was about the size of a large orange, smooth and firm. After removal of the foot an anterior posterior section showed that the growth was mainly situated on the inferior aspect of the metatarsal bones and sprung from the periosteum, especially from the second and third of these bones.

Dr. Roger Williams has made a careful examination of the hospital books. from which it appears that in ten years chloroform was administered at St. Bartholomew's Hospital 12,368 times, with fatal results in ten cases, being about one in 1,236. The most important result of Dr. Williams' investigations, however, is the discovery that when ether, instead of chloroform, has been used during the same period, there were only three deaths out of 14,581 instances. Dr. Roger Williams gives his verdict strongly in favor of chloroform as an anæsthetic.

The growth of science and literature constantly adding to medical nomenclature has long caused to be felt the necessity of a new "German-English Dictionary of Medical Terms." This want has just been supplied by Messrs. Frederick Treves, F.R.C.S., and Hugo Lang. Mr. Treves points out, in his preface, that the march of events has necessitated a thorough recompilation of terms.

G. O. M.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Dr. S. Baruch at the Meeting of the Section on Practice of the Academy of Medicine—Cold Baths in Typhoid Fever.

At the February meeting of the Section on Practice of the Academy of Medicine, Dr. S. Baruch, who was not present at the meeting of the Academy a month before, when the treatment of typhoid fever was discussed, made a stirring and forcible plea for the systematic use of cold baths in this disease. However favorable some of our individual statistics might be, he said, the figures of the Board of Health reports demanded, in language more eloquent than words, that the profession should adopt some means that would enable them to make a more favorable showing. From 25 to 40 per cent. was the death-rate from typhoid in our American cities, and according to Dr. Delafield's investigation 26 per cent. was the death-rate in recent years at the New York Hospital.

Could these figures not be changed? he asked. Happily there was a method of treatment which had the sanction of long usage, the authority of judicious clinical observers, and the evidence of unimpeachable statistics. To further the universal adoption of this method he proposed to devote all his energy, for the reason that he had himself formerly been strongly opposed to it and was now a proselyte. It was unfortunately true, he went on to say, that our conceptions on the subject of hydrotherapy were exceedingly vague, and this was perhaps the chief cause of the absence of unanimity regarding, if not of the antagonism to, its application in typhoid fever, in which its fondest triumphs had been achieved. During a former discussion at the Academy of Medicine Dr. Baruch said he had taken occasion to illustrate the vagueness of the term cold bath as used in this city by citing two cases occurring in two of the largest hospitals, under two of the gentlemen who had spoken disparagingly of the cold bath treatment. One of these patients had the bath (?) administered by being wrapped in a sheet and sprinkled with ice-water until the temperature fell to a satisfactory point. The other was also wrapped in a sheet, which was kept saturated with ice-water by a sponge until the temperature was reduced from 106° to 101°. Surely these were not fair specimens of the cold bath treatment, and the fatal result in both cases could not fairly be charged to this method. The experienced hydrotherapeutist never used ice-water for prolonged application, the aim of all hydrotherapeutic measures being to refresh, to stimulate the nerve centres, and never to induce a sedative effect.

He contended, therefore, that until we adopted an approximately uniform cold bath treatment our discussions of this method would be nugatory and our patients would continue to swell the mortality lists. It had been objected to the Brand method that the physician should not be hampered by strict rules, but should be allowed to use his judgment in each individual case. This might be granted; but at the same time (just as the successful treatment of a tertian intermittent depended upon cinchonism of the patient before the paroxysm was due, whatever might be the manner in which the quinine was administered) the guiding principle, to keep the temperature below 103°, was not to be lost sight of, though the bath might be a little warmer or

colder, or a little longer or shorter, according to circumstances. In the one case cinchonism protected the patient against the return of the attack; in the other the reduction of temperature indicated a condition of the nervous system which protected the patient against the deteriorating influences of the infective process. Another analogy might be drawn from the salicylic treatment of rheumatic fever.

Brand's rule, however, Dr. Baruch said, was not inflexible, as was shown by a letter which he had just received from him in reference to a case the bath treatment of which was detailed in one of our journals. In it he said: "By following my rule is not to be understood such treatment as was given by Dr. — to the child, which was so far reduced in strength and nerve power that it should not have been put into a cold bath, but into a warm one, until it gradually became accustomed to the cold bath, for twenty-four hours. To me it is surprising that Dr. — did not obtain greater disadvantage from the low temperature used in this case; it was a special piece of good luck. I always use warmer baths (usually of the temperature of the room) for twenty-four hours, if the patient has been ill over four days; often also from the beginning." From this extract, he went on to say, it would be gathered that Brand does not advise the plunging of any case into a bath of 65° without regard to individual conditions. The truth was that in no method of treatment was good judgment more necessary than in the treatment of typhoid by the cold bath.

The statistics furnished by men like Juergensen and Vogl were the best possible guide for this or any other country, because they were obtained from hospital practice, civil and military, and they represented the comparative merits of various methods. Military records in Germany were proverbially accurate, and Vogl was the chief of the garrison hospitals at Munich. He offered us the records of 8,325 cases of typhoid treated there during forty-seven years, mentioning each year the type of the disease, derived from symptoms and autopsies, the treatment pursued and the results. The mortality ranged from 40.3 per cent. in 1843 to 2.3 per cent. in 1877–78. Since 1875, when the cold bath treatment was systematically begun, the mortality had never exceeded 4.7 per cent., and the average was 2.7 per cent. To show the carefulness of the records, Dr. Baruch gave a number of extracts taken at random from Vogl's report, and then stated that it might be said, without fear of contradiction, that no therapeutic question had been so thoroughly canvassed as had been done in this report. It demonstrated, among other things, the interesting point that the combined method (water and medicinal) reached quite as high a percentage of mortality as in many of the years preceding, when the expectant treatment was employed, but that the death-rate under the systematic, unremitting bath treatment (Brand method) never exceeded, in seven years, 4.7 per cent., and averaged 2.7 per cent.; neither one of which figures had ever been reached before.

In the Poliklinik at Tübingen Juergensen had obtained even better results. During nine years 217 cases were treated by strict bathing according to Brand, and there was only one death. He used cold compresses for diarrhœa, and continued to bathe even when there was intestinal hæmorrhage. The official reports of the Second German Army Corps showed a reduction of the mortality, under systematic bathing, from 26.3 per cent. to 4.3; and in consequence of this success an order advising the general adoption of this method in the Army was issued by the Surgeon-General. Brand, the originator of the practice, pursued it for thirty years, almost entirely in a private *clientèle*, with the result of one death in 342 cases. Having stated that this wonderful success was due to the strictest attention to detail and the subjection to the bath treatment of every case that showed the slightest suspicion of typhoid symptoms, Dr. Baruch said that it was only by this course that cases could be brought under the influence of the cold bath before the fifth day; a point which is emphasized as essential for reaching the phenomenal success attained in the 1,200 cases reported by Juergensen, Vogl, Brand and the surgeons of the Second Army Corps. If it were objected that it is very difficult to make the diagnosis of typhoid fever before the fifth day, he would reply that the patient should be given the benefit of the doubt and be subjected to the treatment before the diagnosis was established. In fact, he would place every suspicious case of fever in the bath, if the temperature reaches 103°. This was the course pursued at Munich, and he himself constantly resorted to it both in private and hospital practice.

That the sway of antipyretics was now passing away, he went on to say, was evidenced from the recent discussions. The lethal influence of high temperatures was happily losing its hold on the profession; but we should take care that the receding tide did not sweep away the cold bath treatment, which had unfortunately been classed among antipyretic measures. Whenever we gave up this fallacious idea, the cold bath treatment would replace the unsuccessful antipyretic treatment completely. In the Fourth Congress for Internal Medicine, held in 1885, eminent clinicians expressed allmost unanimously the opinion "that until we obtain a specific curative agent for typhoid fever, such therapeusis is to be preferred which is capable of diminishing or removing the effects of the morbific agents, that this aim is most surely fulfilled by hydrotherapy, and that medicinal antipyretics act only against temperature elevation, but do not, like the bath, pro-

duce a modifying effect upon the fever process."

He thought it should be clearly understood that the Brand method is not a "nervous sedative," as had been claimed in a recent paper before the New York State Medical Society, but a refreshing measure, by which the depressing effect of the typhoid poison is to be counteracted. The system was tottering under the enfeeblement of all its functions by the effect of the infection upon the nervous system. The impact of cold water upon the periphery deepened the inspiration, more oxygen was inhaled, more carbonic oxide given off; the refreshing impulse was conveyed to the nervous centres from which the heart and stomach receive tone and the secretions activity. The *rationale* of the bath was so simple, he said, that if once appreciated, no attempt would be essayed to substitute it. The gentle frictions carried on while the patient was in the water stimulated the mucous coats of the superficial vessels, which, as Marcy and others had shown, are paralyzed by the infective process; thus giving rise later to heart failure from absence of propulsive aid. These vessels were thus dilated and the obstacle to heat dissipation removed; while the occasional cold douche over the head and shoulders again contracted the vessels briefly. In this way their activity was maintained. How different the effect of simply putting the patient in the cold water and leaving him in it undisturbed for fifteen minutes, or of wrapping him in a sheet and sprinkling ice-water over him, would be, a very little reflection would indicate.

The bath was not intended as a specific, curative measure; but its action was analogous to that of peripheral stimuli applied to other toxic conditions; and the stupor due to opium toxæmia, in which we had a poison circulating in the blood, which required time for its removal, furnished a fair analogy. Our anti-toxic measures would prove efficient in proportion to the earliness, persistency, and good judgment with which we applied them in the one case just as they would in the other.

Dr. A. L. Loomis in discussing the paper said that he was glad that Dr. Baruch was an enthusiast on the subject, and that he was willing to go as far as the law allows, and even a little further, in his advocacy of the method. When he compared the condition met with in typhoid fever to opium poisoning it seemed to him that he did not properly recognize the cause of the typhoid toxæmia, viz.: a specific infection. The two conditions were very different, and he did not see how they could very well be compared. As to the statistics of typhoid, he believed that if we based our opinions on them we were liable to error. During the last two months he had treated twenty cases of the disease by means of the cold coil, without a single death; but it did not follow from this that the cold coil was the best or only treatment to be used in typhoid. Dr. Baruch had unquestionably placed his statistics in a very enticing way before us; and yet he felt convinced that if he permitted himself to be guided wholly by them he would almost surely have reason sooner or later to regret that he had done so. At the same time, if the opportunity occurred to him to treat a considerable number of typhoid cases together he would be glad to give the method so eloquently advocated a thorough trial. From what little experience he had had with cold bathing in typhoid he believed that it was a powerful agent for restoring vitality if properly employed, and that it was a powerful agent for destroying vitality if improperly used. When the cold bath was given without regard to its effect upon the heart, the capillary circulation, etc., it seemed to him that it was liable to do very great harm.

The chairman, Dr. Francis Delafield, said that the point brought out in the paper that in the United States we had never really tried the Brand method he believed was correct; it being a fact that scarcely any one here had considered the whole treatment thoroughly. One reason for this, no doubt, was the inefficient character of most hospital nursing in this country. The great difficulty was to get a sufficient number of nurses for the very exacting requirements of the method. He confessed that he had had the idea that perhaps one reason why the patients treated by strict cold bathing recovered was because they received no medication whatever.

Dr. Baruch said that he was very glad to have been able to show that the main object of the treatment by cold baths was not to reduce temperature, but to furnish a restorative and stimulant to the nervous system. Brand, indeed, never claimed that his method was antipyretic. It was Liebermeister who was the leading spirit in proclaiming that the benefit derived from cold baths was due to their antipyretic effect, and after giving a bath he often administered 40 or 50 grs. of quinine for the purpose of keeping the temperature down after it had been reduced by the bath. But the result of this combined treatment was a mortality of 18 per cent. As to his analogy between typhoid toxæmia and opium poisoning, he granted that the comparison might be defective in some particulars; but, at the same time, he thought the main points would hold good. In both cases we had a profound poisoning of the system; though in one case the poison acted rapidly and in the other slowly. In both the poison would become eliminated in the course of time if we could but support the patient and prolong life until nature could accomplish this; and in both, therefore, the indication was simply to fortify the flagging powers until this could be accomplished. In regard to statistics, it was true that twenty or thirty, or even a hundred cases were of no practical value; but if we had vast numbers of cases,

the correctness of whose data was vouched for by men of the highest scientific attainments and reputation, he believed that such statistics were to be trusted. P. B. P.

"La Grippe" as a Bacterial Disease.

To the Editor:—Doubtless few now living will again have opportunity to observe so typical an illustration of the behavior of "germs" as a pathogenetic factor, as now exists in the prevailing epidemic of so-called "la grippe." The symptoms are notably consistent with its accredited cause, and with those of other familiar diseases of its class. Its fidelity of expression through the *mucous* surfaces is only equaled by its thoroughness in omitting no part of the same. In observing its selection of the lachrymal, nasal, pulmonary, gastric and intestinal surfaces, the writer looked not elsewhere for effects, until the *fourth* instance of severe (in one grave) aural implications and abscess clearly proved its identity in *this* locality. It appears, that nothing shall be lacking in this disease, to impress all doubters with its genuine parentage. Age, sex, condition, occupation, locality, diathesis, are all and equally its subjects. As judged by the meagre reports of its action in the medical press thus far given, its severity is far from uniform. The gastric type, as frequent in the writer's observation, is not only obstinate, but often induces a prostration alarming in degree. With a clean tongue these cases develop a nausea and vomiting which resists all treatment and continues three to six days and nights. These cases, from ejecting the clear seromucous material primarily, persist until blood and dark or coffee-ground ejections appear. Catarrhal symptoms proper are as often wholly absent as otherwise. Who is authorized to christen this nameless (not helpless) visitor? Nosological requirements excluded, it is safe to assume that a legion of its English victims would oppose its revision. More to be desired is a remedy. Assuming the inference correct, that the large class who develop mild symptoms are the subjects of less malignant or potential infection, it is possible that an agent would suffice for relief without the necessity of displaying properties at once germicidal and homocidal.

Characteristics of the disease favor a probability that a cure should be discovered among the agents recognized as antidotal of the class of causes producing it.

H. C. MARKHAM, M.D.

Independence, Ia., January 31, 1890.

MEASLES is epidemic in some towns in Indiana. In Harrodsburg, a place with a population of only about five hundred, there have been one hundred and seventy-five cases.

BOOK REVIEWS.

A HANDBOOK OF DISEASES OF WOMEN, INCLUDING DISEASES OF THE BLADDER AND URETHRA. By DR. F. WINCKEL, Professor of Gynecology, and Director of the Royal University Clinic for Women in Munich. Authorized translation edited by THEOPHILUS PARVIN, M.D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia. Second edition, revised and enlarged, with 150 Illustrations. Philadelphia: P. Blakiston, Son & Co.

This publication which has passed rapidly to its second edition is a complete treatise upon the subjects enumerated on its title pages, in a closely printed and richly illustrated volume of 756 pages. The American gynecologists will find many valuable references to eminent authorities on the subjects of which the book treats, but will look in vain, except in one or two instances, for any mention or acknowledgement for American gynecology. The book presents a valuable review of foreign gynecology and serves to the reader a concise picture of its present status. To its eminent editor, whose name alone upon the title page of any book would insure it a reading, is due the thanks of all American surgeons who are unable to peruse the work in its original.

The work is divided into eight sections.

Section 1 includes Anomalies and Diseases of the External Sexual Organs—Historical—under the following chapters: Chapter i., Deformities of the Vulva; chapter ii., Hyperplasia and Hypertrophy of the Vulva; chapter iii., Hernia of the Vulva; chapter iv., Neoplasms of the Vulva; chapter v., Nutritive Disturbances, Inflammation and Exanthemata of the Vulva; chapter vi., Deformities and Diseases of the Vulva-Vaginal Glands; chapter vii., Injuries of the External Genitals.

Section 2 includes Abnormalities and Diseases of the Vagina under the following chapters: Chapter i., The Affections of the Hymen; chapter ii., Malformation of the Vagina; chapter iii., Displacements of the Vagina; chapter iv., Neoplasms of the Vagina; chapter v., Nutritive Disturbances of the Vagina; chapter vi., Neurosis of the Vagina; chapter vii., Foreign Bodies in the Vagina; chapter viii., Lesions of the Vagina and their Results, Vaginal Cicatrices.

Section 3 includes Anomalies and Diseases of the Uterus under the following subdivisions: chapter i., Malformations of the Uterus; chapter ii., Changes in the Form and Position of the Uterus; chapter iii., Neoplasms of the Uterus; chapter iv., Nutritive Disturbances of the Uterus; chapter v., Stenosis and Atresia of the Uterus, Hydrometra and Hematometra; chapter vi., Anomalies of Menstruation.

Section 4 includes Malformations and Diseases of the Fallopian Tubes, under the following headings: Chapter i., Incomplete Development of the Fallopian Tubes; chapter ii., Displacements and Malformations of the Fallopian Tubes; chapter iii., Neoplasms of the Fallopian Tubes; chapter iv., Inflammation and Tuberculosis of the Fallopian Tubes.

Section 5 includes Anomalies and Diseases of the Ovaries, under the following headings: chapter i., Anomalies in Development and Form; chapter ii., Displacements of the Ovaries; chapter iii., Neoplasms of the Ovaries; chapter iv., Nutritive Disturbances of the Ovaries.

Section 6 includes Anomalies and Diseases of the Uterine Ligaments, Peritoneum, and Pelvic Connective Tissue, under the following: Chapter i., Affections of the Round Ligaments; chapter ii., Affections of the Broad Ligaments; chapter iii., Inflammation of the Pelvic Peritoneum, Pelvic Peritonitis; chapter iv., Inflammation of the Pelvic Connective Tissue; chapter v., Intraperitoneal Effusion of Blood into the Pelvis; chapter vi., Parasites of the Female Genitals and Pelvic Connective Tissue.

Section 7 includes Anomalies of the Mammary Glands under the following chapters: Chapter i., Anomalies of Development; chapter ii., Malformations and Diseases of the Nipple and Areolar; chapter iii., Neoplasms of the Female Breast; chapter iv., Nutritive Disturbances of the Female Breast; chapter v., Mastodynia, Neuralgia of the Breast; chapter vi., Parasites of the Female Breasts; chapter vii., Foreign Bodies in the Female Breasts.

Section 8 includes Diseases of the Female Urethra and Bladder under the following: Chapter i., Examination of the Female Urethra and Bladder; chapter ii., Malformations and Diseases of the Female Urethra; chapter iii., Nutritive Diseases of the Female Urethra; chapter iv., Neoplasms of the Female Urethra; chapter v., Neuralgias of the Female Urethra—Foreign Bodies in the Female Urethra; chapter vi., Injuries of the Female Bladder; chapter vii., Neoplasms in the Walls of the Female Bladder; chapter viii., Nutritive Disorders of the Female Bladder; chapter ix., Foreign Bodies in the Female Bladder; chapter x., Neurosis of the Female Bladder.

REPORT OF THE SURGEON-GENERAL OF THE ARMY FOR THE FISCAL YEAR ENDING JUNE 30, 1889.

This report is chiefly occupied with matters pertaining to the health and sanitation of the army in general and of individual posts in particular. A large amount of statistical matter has been arranged to illustrate these points, and interesting comparisons are drawn between the medical relations of our own army and those of European armies. About one-half of the report is made up of statistical reports of diseases treated at the various stations; these have been tabulated with much care. The entire report is a medical history for the year, of 24,726 men, representing the mean strength of the army.

ASSOCIATION NEWS.

American Medical Association.

Section on Diseases of Children.

All members of the American Medical Association who are interested in the subject of Pediatrics, are earnestly invited to prepare papers for reading in this Section at the meeting to be held at Nashville, Tenn., May 20, 1890.

There can be no department of medicine which should appeal to all the workers of the profession more than the diseases of children. The outlook is favorable to a large attendance in this Section.

Please send title of paper to either of the officers of the Section at as early a date as possible.

(Signed) I. N. LOVE, M.D. Chairman,
Grand Ave. and Lindell Boul., St. Louis, Mo.
E. F. BRUSH, M.D., Secretary,
Mt. Vernon, N. Y.

Office of the President, St. Louis, March 7, 1890.

MISCELLANY.

CONCERNING THE TENTH INTERNATIONAL MEDICAL CONGRESS.—I am directed by the Secretary-General of the Tenth International Congress to give the greatest possible publicity to the circular, the main points of which I herewith transmit to you with the request that they be published. Very respectfully yours,

A. JACOBI, M.D.

110 West 34th street, New York, March 7, 1890.

Invitation for an International Medical and Scientific Exhibition.

In connection with the Tenth International Medical Congress to be held in Berlin between the 4th and 10th of August, there is to be an International Medical and Scientific Exhibition. The exhibits will be of an exclusively scientific nature, as follows:

New or improved scientific instruments and apparatuses for biological and strictly medical purposes, inclusive of apparatuses for photography and spectral analysis as far as applicable to medicine.

New objects and preparations in pharmacological chemistry and pharmacy.

New foods.

New or improved instruments subservient to any of the departments of medicine, including electrotherapy.

New plans and models for hospitals, convalescent homes, and disinfecting and bathing insiitutions and apparatuses.

New arrangements for nursing, including transportation, baths, etc.

New apparatuses in hygiene.

Applications or inquiries inscribed "Ausstellungs-Angelegenheit," and accompanied with a printed card con-

taining the name and address of the firm thus applying, ought to be directed to the Secretary-General, Dr. O. Lassar, Carlstrasse, No. 19, Berlin, N.W., Germany.

R. Virchow, President.

E. von Bergmann, E. Leyden, W. Waldeyer, Vice-Presidents.

O. Lassar, Secretary-General.

HEALTH IN MICHIGAN.—For the month of February, 1890, compared with the preceding month, the reports indicate that cerebro-spinal meningitis, cholera morbus, inflammation of brain, dysentery, measles, whooping-cough, typho-malarial fever and inflammation of kidney increased, and that typhoid fever and cholera infantum decreased in prevalence.

Compared with the preceding month the temperature was slightly lower, the absolute humidity was less, the relative humidity was the same, the day ozone was less, and the night ozone was more.

Compared with the average for the month of February in the four years 1886–1889, influenza, measles, cerebro-spinal meningitis, cholera morbus, and membranous croup, were more prevalent, and cholera infantum, typhoid fever, typho-malarial fever and scarlet fever, were less prevalent in February 1890.

For the month of February, 1890, compared with the average of corresponding months in the four years 1886–1889, the temperature was much higher, the absolute humidity was more, the relative humidity was less, and the day and night ozone were more.

Including reports by regular observers and others, diphtheria was reported present in Michigan, in the month of February, 1890, at 58 places, scarlet fever at 77 places, typhoid fever at 34 places, measles at 69 places, and small-pox at 2 places.

Reports from all sources show diphtheria reported at 3 places less, scarlet fever at 15 places more, typhoid fever at 14 places less, measles at 42 places more, and small-pox at 2 places more in the month of February, 1890, than in the preceding month.

A PNEUMATOSCOPE.—The cable brings news of the invention of a wonderful instrument in Berlin, by means of which an exact differential diagnosis of diseases of the lungs will be possible. The inventor is Dr. Janiczewski. The description of the instrument is too indefinite to permit of an understanding of its *modus operandi*.

THE physicians of Vienna having complained that patients make use of old prescriptions to obtain medicines, the Minister of the Interior has ordered that the physician who does not desire his prescription to be repeated may write upon it the words "*ne repetatur*," in which case the druggists will have no right to re-fill it.

LETTERS RECEIVED.

Dr. A. W. Strickler, Scottdale, Pa.; Dr. Barre, Pittsburg, Pa.; Dr. Carl Brumme, Detroit, Mich.; Dr. D. Bryson Delavan, New York; Dr. G. A. White, Sacramento, Cal.; Dr. G. F. Cook, Oxford, O.; Dr. F. F. Hume, New York; Dr. F. H. Stewart, Church Hill, O.; V. Ruzicka, Baltimore, Md.; Dr. A. C. Stokes, Trenton, N. J.; Dr. A. C. Lamothe Ramsay, St. Cloud, Minn.; Dr. F. Harris, Langford, S. Dak.; G. P. Rowell & Co., New York; Dr. S. P. Deahofe, Potsdam, O.; J. Walter Thompson, New York; Dr. R. J. Dunglison, Philadelphia; Dr. Frank H. Holland, Ft. Pembina, N. D.; F. A. Davis, Philadelphia; Dr. W. R. Nottage, Westport, Mass.; Dr. Chas. Denison, Denver, Col.; Dr. P. M. Carnrick, New York; M. R. Barrett & Co., Chicago; Dr. J. Berrien Lindsley, Nashville, Tenn.; Dr. E. W. Bartlett, Milwaukee, Wis.; C. A. Young, Nashville, Tenn.; Geo. F. Child, Chicago; Dr. J. R. Barnett, Neenah, Wis.; P. Blakiston, Son & Co., Philadelphia; National Typewriter Co., Boston; Joseph Robbins & Co., Quincy, Ill.; Dr. S. C. Ayers, Cincinnati, O.; Dr. Theophilus Parvin, Philadelphia; Dr. G. W. Gallagher, New Haven, Pa.; Allen & Yates, Buffalo, N. Y.; Philip J. Mitchell, Philadelphia; Dr. Giles S. Mitchell, Cincinnati, O.; Gustav E. Stechert, New York; Dr. G. K. Dickinson, Jersey City, N. J.; Dr. C. H. Wilcox, Berwick, Ill.; E. L. Shurley, Detroit, Mich.; Jas. Walker, Leeds, Eng.; The Paquin Vaccine Co., Columbus, Mo.; Dr. Geo. L. Eyster, Rock Island, Ill.; Dr. W. B. Henderson, Pittsburgh, Pa.; Dr. Henry Marcy, Boston; Dr. C. Green, Beaver City, Neb.; A. J. Howe, Cincinnati, O.; Dr. C. I Miller, Whitewater, Wis.; Dr. Geo. Weber, Brooklyn, N. Y.; Dr. A. L. Hummel, Philadelphia; Med. Dept. Univ., Washington, D. C.; Dr. A. J. Brobst, Macungie, Pa.

STATE MEDICAL ASSOCIATION MEETINGS IN 1890.

STATE.	SEC'YS NAME AND ADDRESS.	TIME AND PLACE.
Alabama	T. A. Means, Montgomery.	Birmingham, April 8.
Arkansas	L. P. Gibson, Little Rock.	Little Rock, May 14.
California	W. W. Kerr, San Francisco.	Los Angeles, April 15.
Colorado	H. W. McLauthlin, Denver.	Denver, June 17.
Connecticut.	N. E. Wordin, Bridgeport.	New Haven, May 28.
Dakota	R. C. Warne, Mitchell.	Sioux Falls, June 12.
Delaware	J. A. Ellegood, Laurel.	Wilmington, June 10.
Florida	A. W. Knight, Jacksonville.	Key West, April 8.
Georgia	King P. Moore, Macon.	Brunswick, April 16.
Illinois	D. W. Graham, Chicago.	Chicago, May 6.
Indiana	E. S. Elder, Indianapolis.	Indianapolis, May 14.
Iowa	C. F. Darnell, West Union.	Des Moines, April 16.
Kansas	J. E. Minney, Topeka.	Salina, May 13.
Kentucky	Steele Bailey, Stanford.	Henderson, May 14.
Louisiana	P. B. McCutchon, N. Orleans.	Baton Bouge, May 13.
Maine	C. D. Smith, Portland.	Portland, June 10.
Maryland	G. A. Taneyhill, Baltimore.	Baltimore, April 22.
Massachusetts.	F. W. Goss, Boston.	Boston, June 10.
Michigan	Geo. Duffield, Detroit.	Grand Rapids, May 20.
Minnesota	C. B. Witherle, St. Paul.	St. Paul, June 19.
Mississippi	W. E. Todd, Jackson.	Jackson, April 21.
Missouri	J. C. Mulhall, St. Louis.	Excelsior Sp'gs, May 20.
Nebraska	M. L. Hildreth, Lyons.	Beatrice, May 13.
North Carolina	J. M. Hays, Oxford.	Oxford, May 27.
N. Hampshire.	G. P. Conn, Concord.	Concord, June 16.
New Jersey	W. Pierson, Orange.	Schooley's Mountain, June 10.
New York	E. D. Ferguson, Troy.	New York, October 22.
Ohio	G. A. Collamore, Toledo.	Columbus, June 3.
Pennsylvania.	W. B. Atkinson, Philadelphia	Philadelphia, June 10.
Rhode Island.	W. R. White, Providence.	Providence, June 12.
South Carolina	W. P. Porcher, Charleston.	Laurens, April —
Tennessee	D. E. Nelson, Chattanooga.	Memphis, April 8.
Texas	F. E. Daniel, Austin.	Fort Worth, April 22.
Vermont	D. C. Hawley, Burlington.	{ Rutland, June 26. { Montpelier, Oct. 9.
Virginia.	L. B. Edwards, Richmond.	Rockbridge Alum Sp'gs, August or September.
Washington.	C. L. Flannigan, Olympia.	Spokane Falls, May 14.
West Virginia.	J. L. Fullerton, Charlestown.	Wheeling.
Wisconsin.	J. R. McDill, Milwaukee.	Milwaukee, June 4.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from March 1, 1890, to March 7, 1890

Major J. P. Kimball, Surgeon U. S. A., granted leave of absence for twenty days. Par. 1, S. O. 25, Dept. of the Missouri.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending March 8, 1890.

Medical Inspector W. K. Schofield, ordered for examination preliminary to promotion to Medical Director.

Surgeon D. McMurtrie, ordered for examination preliminary to promotion to Medical Inspector.

Asst. Surgeon Manley F. Gates, detached from Navy Yard, League Island, and to the U. S. S. "Kearsarge."

Asst. Surgeon H. N. T. Harris, detached from the U. S. S. "Kearsarge" and ordered home.

CORRIGENDUM.

In an editorial heading on page 385 of the present issue, referring to the annual meetings of the Association, read Permanent *Dates* for the Annual Meetings instead of Permanent Duties.